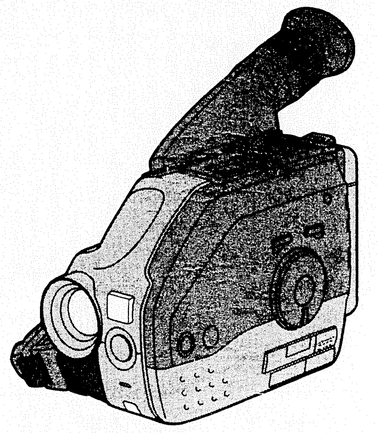
VIDE-V32642

JVC

Instructions Manual

CAMERA-RECORDER/PLAYER

GR-AX33U



Compact VHS

videomovie

VHS C

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No. 86202
October 1992

Thank you for purchasing the JVC Compact VHS VideoMovie. Learn about all the available features and take advantage of them for your total moviemaking enjoyment. Before using this VideoMovie, read this instruction booklet carefully so that you will obtain the best results from your VideoMovie.

SAFETY PRECAUTIONS

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The AA-V10U AC Power Adapter/Battery Charger should be used with:
AC 120 V∿, 60 Hz in the USA and Canada,
AC 110 – 240 V∿, 50/60 Hz in other countries.

CAUTION (applies to the AA-V10U)
TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION (s'applique à l'AA-V10U)
POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Warning on lithium battery
The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C (212°F) or incinerate.
Replace battery with Panasonic (Matsushita Electric) CR2025; use of another battery may present a risk of fire or explosion.

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

NOTES:

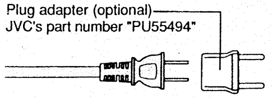
- The rating plate (serial number plate) and safety caution are on the bottom and/or the back of the main unit.
- The rating plate (serial number plate) of the AC power adapter/battery charger is on its bottom.

You are recommended to carefully read the cautions on pages 52 and 53 before use.

When using the AC Power Adapter/Battery Charger in areas other than the USA

- The provided AC Power Adapter/Battery Charger features automatic voltage selection in the AC range from 110 V to 240 V.

USING HOUSEHOLD AC PLUG ADAPTER
In case of connecting the unit's power cord to an AC wall outlet other than American National Standard C73 series type use an AC plug adapter, called a "Siemens Plug", as shown.
For this AC plug adapter, consult your nearest JVC dealer.



Plug adapter (optional)
JVC's part number "PU55494"

VHS C HQ High Quality

Cassettes marked VHS C can be used with this VideoMovie.

JVC COMPANY OF AMERICA
Division of US JVC CORP.
41 Slater Drive, Elmwood Park, New Jersely 07407

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JVC Printed in Japan

This VideoMovie is designed to be used with NTSC-type color television signals. It cannot be used for playback with a television of a different standard. However, live recording and viewfinder playback are possible anywhere. Use the BN-V12U/V22U/V50U/V60U battery packs and, to recharge them, the provided multi-voltage AC power adapter/battery charger. (An appropriate conversion adapter may be necessary to accommodate different designs of AC outlets in different countries.)

INFORMATION
This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Change or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

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MAJOR FEATURES

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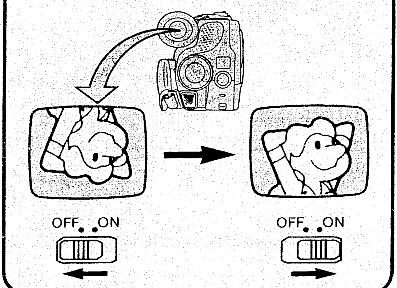
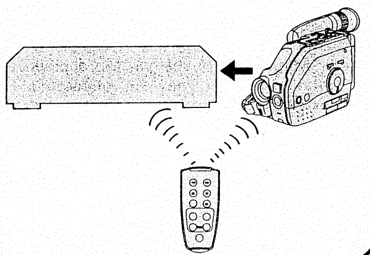
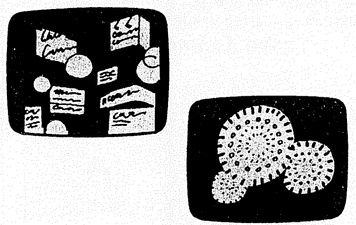
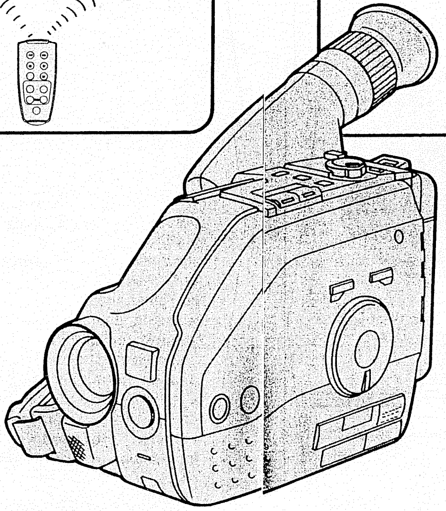


Multi Brand Remote Control Unit ☞ p. 37

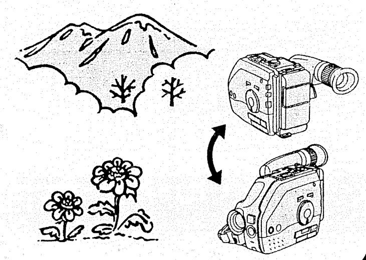


Twilight Mode ☞ p. 27

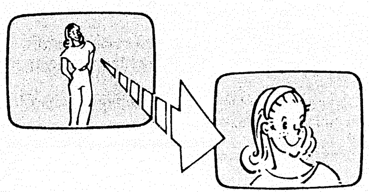




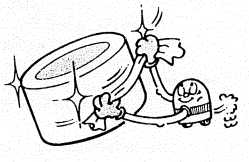
Full Range AF System with Auto Macro ☞ p. 24



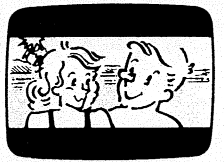
8x Power Zoom Lens ☞ p. 26



Auto Head Cleaner ☞ p. 54



Cinema Mode Facility ☞ p. 27



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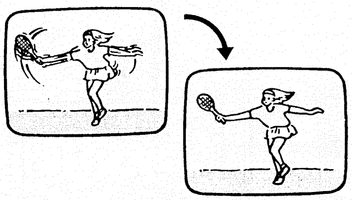
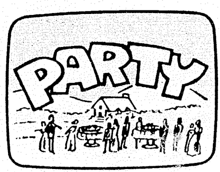
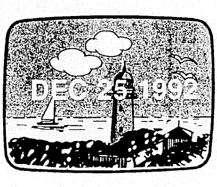


Digital Superimpose (8 colors, nega/posi) ☞ p. 30

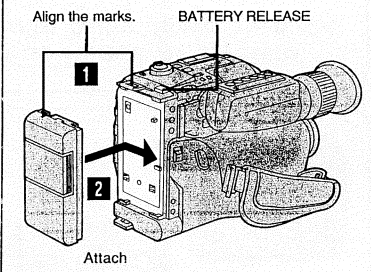


Date Titler ☞ p. 23



QUICK OPERATION GUIDE

SUPPLY POWER


Align the marks.
BATTERY RELEASE
1
2
Attach

A. Using the battery pack

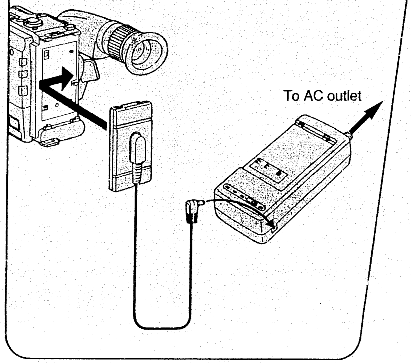
1 Align mark on battery pack with similar mark on back of VideoMovie. (Charging procedure, ☞ P.12)

2 Slide the battery pack in the direction of the arrow until it locks into place.

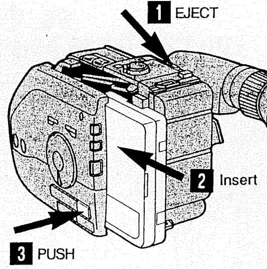
To remove the battery pack

Press BATTERY RELEASE and slide out the battery pack.

B. Using the AC power adapter (☞ P.13)


To AC outlet

INSERTING A VIDEO CASSETTE


1 EJECT
2 Insert
3 PUSH

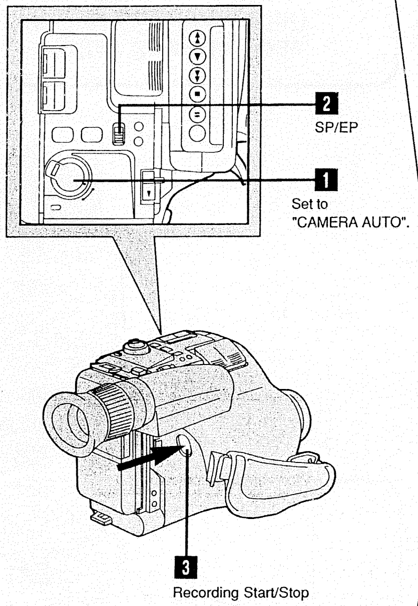
1 Slide EJECT.

2 Insert a video cassette.

3 Press PUSH.

(For more details, ☞ P.16.)

RECORDING


2
SP/EP
1
Set to
"CAMERA AUTO".
3
Recording Start/Stop

1 Set the power switch to "CAMERA AUTO".
— The power indicator will light and image will be seen in the viewfinder.

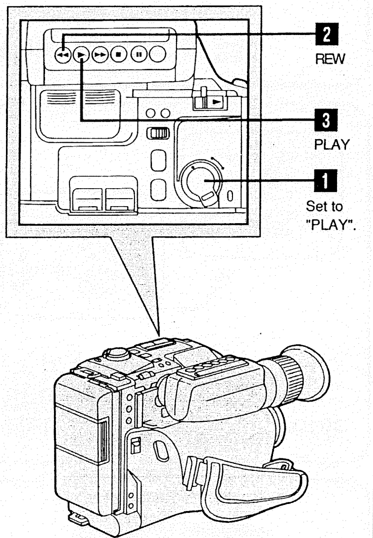
2 Set SP/EP as required.

3 Press the Recording Start/Stop button.
— Recording starts.

- To stop recording temporarily, press the Recording Start/Stop button again.

(For more details, ☞ P.20.)

PLAYBACK


2
REW
3
PLAY
1
Set to
"PLAY".

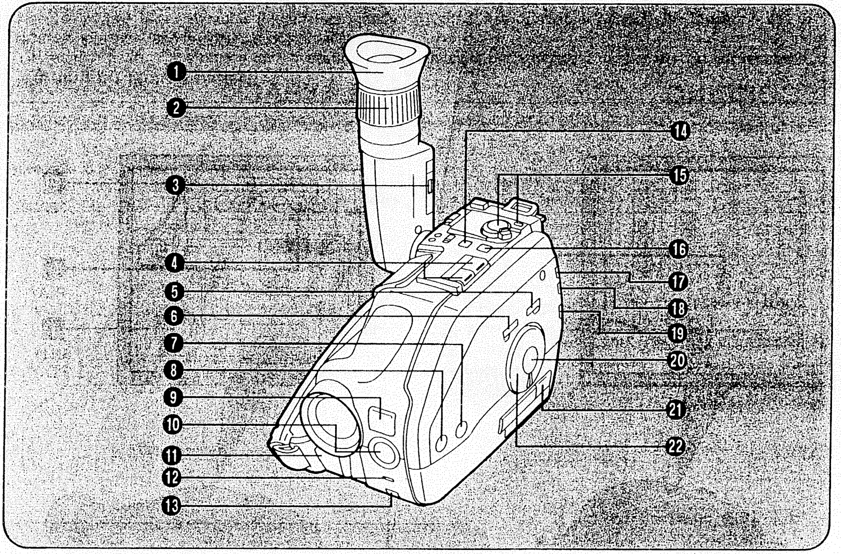
1 Set the power switch to "PLAY".

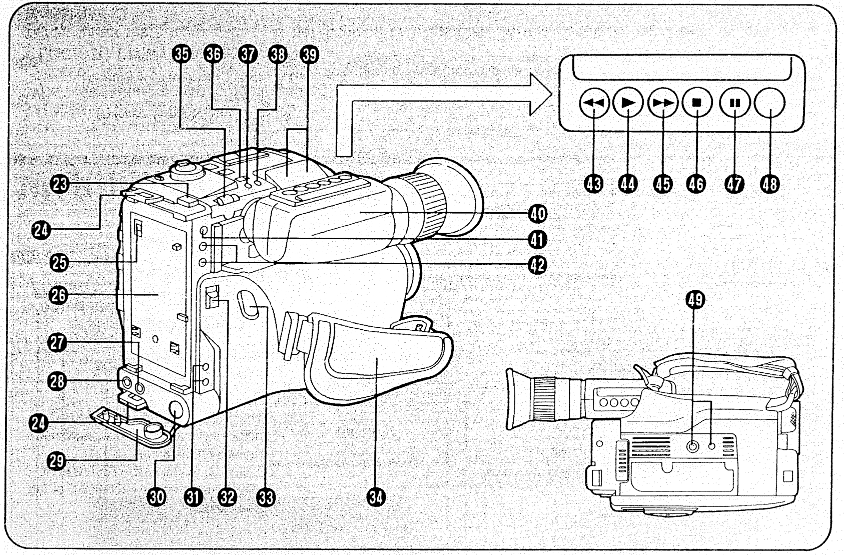
2 Press REW.
— The tape will automatically stop at the beginning of the tape.

3 Press PLAY.
— Playback starts and the playback picture appears in the viewfinder.

(For more details, ☞ P.34.)

CONTROLS AND CONNECTORS



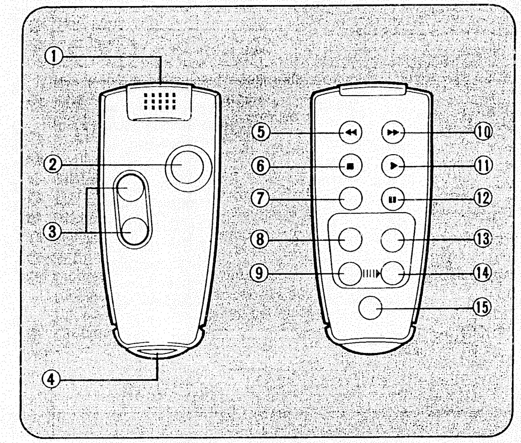


No.		Page
①	Eyepiece The viewfinder eyepiece can be removed for cleaning. Turn the eyepiece counterclockwise and pull it off.	
②	Diopter adjustment control	17
③	SELF PORTRAIT switch	21
④	FOCUS AUTO/MAN. buttons	25
⑤	DISPLAY on/off button	23
⑥	TITLE on/off button	31
⑦	CINEMA button	27
⑧	TWILIGHT button	27
⑨	White balance sensor window Detects type of light for white balance adjustment.	
⑩	Infrared beam sensor window Receives the transmitted signal from a remote control unit.	
⑪	Microphone	
⑫	Tally lamp Lights to show that the recording is in progress.	
⑬	Second recording start/stop button (SUB TRIGGER)	21
⑭	RETAKE(F) button	22
⑮	Power switch with LED indicator **"PLAY" position:** To use for VCR functions. **"POWER OFF" position:** Turns power off. **"CAMERA AUTO" position:** ■ LOCK Setting to this position locks the VideoMovie in the Full Auto mode, eliminating the possiblity of missoperation by accidentally touching the manual operation buttons while shooting. It is convenient when asking someone else to do the shooting. ■ RELEASE Manual operation is possible when set to this position. • When shooting, these controls can be used only in the "RELEASE": DISPLAY on/off, TITLE on/off, FOCUS AUTO/MAN., TWILIGHT, CINEMA, RETAKE, FADER, SHUTTER CONTROL, BLC, SELECT, DATE/TIME ADJ. SELECT, and DATE/TIME ADJ. SET buttons, Rotary function selector. ■ Turn the power switch from CAMERA AUTO LOCK to RELEASE while pressing the small button.	
⑯	RETAKE(R)/Q.REV. button	22
⑰	FADER button	28

No.		Page
⑱	SHUTTER CONTROL button	29
⑲	BLC (Back Light Compensation) button	26
⑳	SELECT button	23
㉑	PUSH button	16
㉒	Rotary function selector	23
㉓	BATTERY RELEASE button	12
㉔	Eyelets for shoulder strap	19
㉕	TAPE LENGTH select switch	18
㉖	Battery pack mount	12
㉗	REMOTE jack	40
㉘	PHONE jack For monitoring the sound during shooting or playback, connect an headphone to this jack.	
㉙	Connector cover Open when using the REMOTE jack, PHONE jack or AV OUT connector.	
㉚	AV OUT connector Both audio and video signals can be obtained from this connector for editing, etc.	
㉛	TRACKING buttons	34
㉜	REC LOCK switch When the power switch is set to "CAMERA AUTO", power can be turned ON and OFF using this switch.	
㉝	Recording start/stop button	20
㉞	Grip strap	17
㉟	EJECT switch	16
㊱	SP/EP recording mode select switch	18
㊲	COUNTER M (memory) button	35
㊳	COUNTER R (reset) button	35
㊴	Power zoom buttons	26
㊵	Electronic viewfinder	17
㊶	DATE/TIME ADJ. SELECT button	15
㊷	DATE/TIME ADJ. SET (+/–) buttons	15
㊸	REW button	34
㊹	PLAY button	34
㊺	FF button	34
㊻	STOP button	34
㊼	PAUSE button	22
㊽	EDIT button	39
Bottom		
㊾	Tripod mounting socket	19

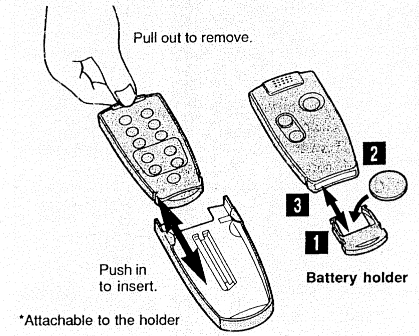
CONTROLS AND CONNECTORS (Cont'd)

Multi Brand Remote Control Unit (provided)



No.	Page
① Infrared beam transmitting window	37
② Recording START/STOP button	20
③ ZOOM (T/W) buttons	26
④ Battery holder	10
⑤ REW button	22, 34
⑥ STOP button	34
⑦ VCR CTL. button	37
⑧ EDIT STANDBY button	38
⑨ EDIT START button	38
⑩ FF button	22, 34
⑪ PLAY button	34
⑫ PAUSE button	22
⑬ EDIT CLEAR button	37, 38
⑭ EDIT END button	38
⑮ PRESET button	37

- ■ Buttons ①, ③, ⑤, ⑥, ⑩, ⑪ and ⑫ function the same as the VideoMovie's buttons with the same names.
- ■ Buttons ⑤ works as the RETAKE R/Q. REV and ⑩ as the RETAKE F of the VideoMovie.



LITHIUM BATTERY INSERTION

1. Pull out the battery holder.
2. Insert the lithium battery (CR2025), with its plus(+) side up, into the battery holder.
3. Replace the battery holder until it clicks in place.

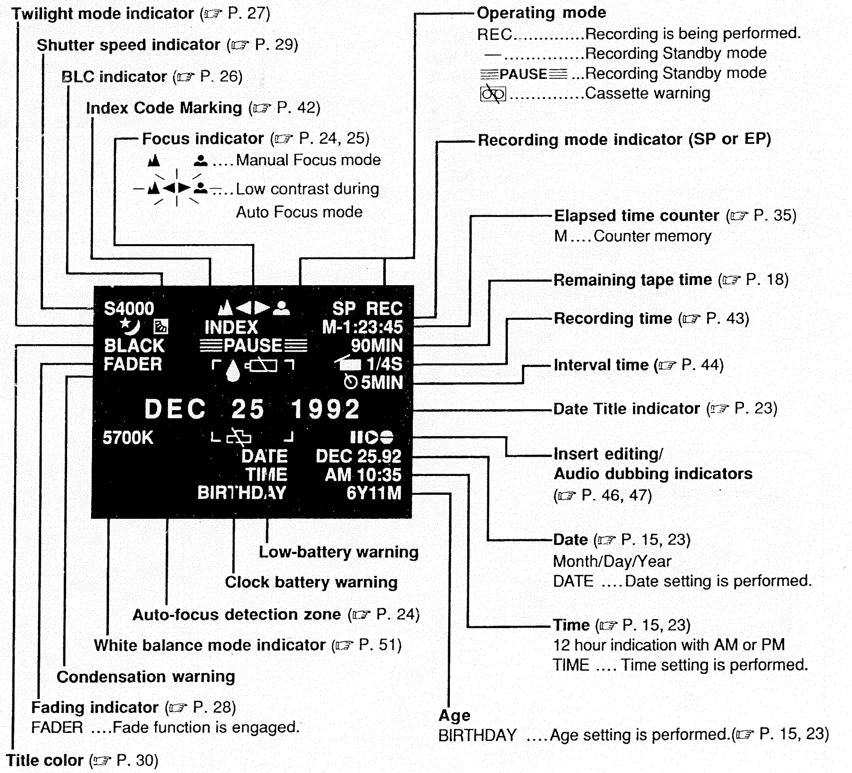
Warning on lithium battery

The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C (212°F) or incinerate.

Replace battery with Panasonic (Matsushita Electric) CR2025; use of another battery may present a risk of fire or explosion.

- ■ Dispose of used battery promptly.
- ■ Keep away from children.
- ■ Do not disassemble and do not dispose of in fire.

VIEWFINDER INDICATIONS



Twilight mode indicator (☞ P. 27)

Shutter speed indicator (☞ P. 29)

BLC indicator (☞ P. 26)

Index Code Marking (☞ P. 42)

Focus indicator (☞ P. 24, 25)
▲ 👤 .... Manual Focus mode
—▲◀▶👤— ... Low contrast during Auto Focus mode

Operating mode
REC.............Recording is being performed.
—..............Recording Standby mode
≡PAUSE≡ ...Recording Standby mode
⊠..............Cassette warning

Recording mode indicator (SP or EP)

Elapsed time counter (☞ P. 35)
M.... Counter memory

Remaining tape time (☞ P. 18)

Recording time (☞ P. 43)

Interval time (☞ P. 44)

Date Title indicator (☞ P. 23)

Insert editing/ Audio dubbing indicators (☞ P. 46, 47)

Date (☞ P. 15, 23)
Month/Day/Year
DATE .... Date setting is performed.

Time (☞ P. 15, 23)
12 hour indication with AM or PM
TIME .... Time setting is performed.

Age
BIRTHDAY .... Age setting is performed.(☞ P. 15, 23)

Low-battery warning

Clock battery warning

Auto-focus detection zone (☞ P. 24)

White balance mode indicator (☞ P. 51)

Condensation warning

Fading indicator (☞ P. 28)
FADER .... Fade function is engaged.

Title color (☞ P. 30)

WARNINGS

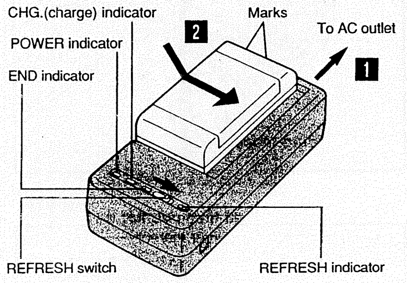
LOW-BATTERY WARNING (▭)
When the battery power is coming to an end, a battery warning indication appears in the viewfinder. After indication appears, the power turns off automatically. Replace the battery pack with a fully charged one.

CLOCK BATTERY WARNING (▭)
Blinks when the lithium battery is not in place or exhausted. In this condition, no date/time function is available.

CONDENSATION WARNING (💧)
Appears when the excessive moisture condensation occurs inside the unit.

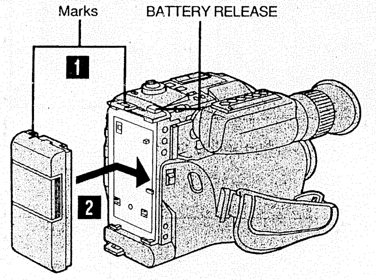
CONDENSATION WARNING (⊠)
Blinks to warn that no cassette or a cassette without safety tab is loaded.

PREPARATIONS



	Charging time	Discharging time
BN-V12U	approx. 70min.	approx. 210 min.
BN-V22U	approx. 130min.	approx. 420 min.
BN-V50U	approx. 170min.	approx. 510 min.
BN-V60U	approx. 130min.	approx. 420 min.

- The diagrams above indicate the approximate charging and discharging times of battery packs that are fully charged.
- Charging time and discharging time will vary depending on the ambient temperature and the status of the battery pack.



Recording time

BN-V12U	approx. 45 min.
BN-V22U	approx. 90 min.
BN-V50U	approx. 105 min.
BN-V60U	approx. 90 min.

- The recording time per charge is influenced by the duration of the recording standby, frequency of zooming, etc. It is safer to have spare battery packs.

POWER SUPPLY SYSTEM

The convenient 3-way power supply system gives you a choice of the most appropriate power supply unit, depending on the application.

- No function is available without power supply.
- Do not use any power supply other than specified.
- Never attempt to use these power supply units with any equipment other than the VideoMovie.
- The provided AC Adapter/Battery Charger features automatic voltage selection in the AC range from 110 V to 240 V.

WITH BATTERY PACK

The battery pack has been kept in the uncharged state for shipment. Therefore, before use, be sure to charge it.

Charging the battery pack

1. Connect the AC power cord to a wall outlet.
   — The power indicator lights.
2. Align marks and slide the battery pack in the direction of the arrow until it locks in place.
   — The CHG. indicator lights.
   — When charging has been completed, the END indicator will light.
3. Slide the battery pack in the opposite direction of the arrow.

Attaching the battery pack

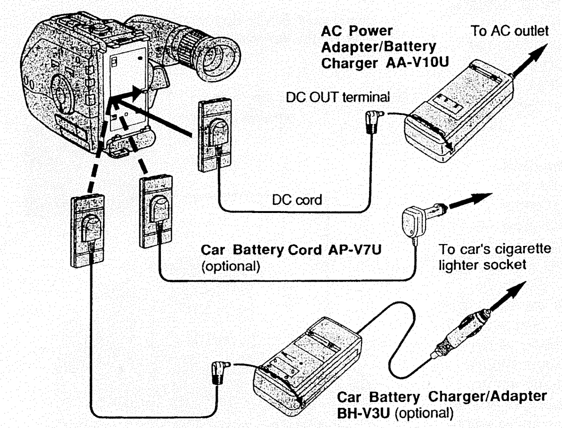
1. Align mark on battery pack with similar mark on back of VideoMovie.
2. Slide the battery pack into place in the direction of the arrow until it locks in place.

To remove the battery pack:
Slide out the battery pack while pressing BATTERY RELEASE.

Using the REFRESH feature

The REFRESH feature on the AC power adapter allows you to completely discharge the power from the battery pack before charging. After charging the battery pack several times, the actual battery operating time will gradually decrease. For this reason it is recommended to use the REFRESH feature only after every 5 charges.

1. Attach the battery pack to the adapter as illustrated above.
2. Slide REFRESH in the direction of the arrow.
   — The REFRESH indicator will light and discharging will begin.
   — After discharging is completed, the indicator will go off.


AC Power Adapter/Battery Charger AA-V10U
To AC outlet
DC OUT terminal
DC cord
Car Battery Cord AP-V7U (optional)
To car's cigarette lighter socket
Car Battery Charger/Adapter BH-V3U (optional)

WITH AC POWER

Use the AC Power Adapter/Battery Charger.

IN A CAR

Use the Car Battery Cord or Car Battery Charger.

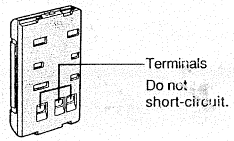
- Leave the car's engine idling when using the car battery. (For use with 12 V negative-grounded cars only.)
- The battery pack can also be recharged with the BH-V3U. Refer to the instruction booklet of the BH-V3U. (For use with 12 V or 24 V negative grounded cars only.)

Notes:

- Do not repeatedly recharge a battery pack without fully discharging it. Its service life will decrease. Use the REFRESH feature after every 5 charges.
- Even if a battery pack is fully charged, but is not used, it naturally discharges gradually. Be sure to recharge the battery pack just before using it, or the day before you intend to use it.
- This unit becomes warm due to the flow of electric current inside. Operate it in places having good ventilation. Do not allow it to discharge in a container, such as a bag, etc. Blocking the ventilation causes the temperature inside the unit to rise, possibly resulting in a damaged unit.
- If either recharging or discharging is stopped in the middle of the process, remove the battery pack before unplugging the AC cord.
- This unit incorporates an over-discharging protection circuit; however, immediately remove the battery pack from this unit after discharging has been completed to maintain the battery pack's capacity.
- If used near a radio, the AC power adapter may interfere with reception.
- Be sure to unplug the DC cord before charging or discharging the battery pack.
- Before storing the battery pack for a long period it is recommended to discharge it. To discharge the battery pack, unplug the AC adapter and attach the battery pack before setting the REFRESH switch in the direction of the arrow. Slide the REFRESH switch in the direction of the arrow. The REFRESH indicator will light. When discharge is completed, the indicator will go off.
- The REFRESH feature will not function if the power status of a battery pack is discharged (No power remains).
- When the CHG.indicator is blinking, the battery pack has become hot. Wait for a while for the battery pack to cool. With a just-purchased battery pack, or with a battery pack that has been stored for a long period, the CHG.indicator may not light properly. In such a case, remove and reattach the battery pack again, then do the recharging procedure. The CHG.indicator should light during recharging to indicate, the battery pack is normal. If this is not the result, consult your nearest JVC dealer.

A WORD ON THE EXCLUSIVE BATTERY PACKS

The battery packs are nickel-cadmium batteries and nickel-metal hydride batteries. Be sure to carefully read the caution attached to the battery pack.

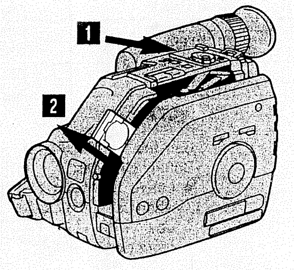


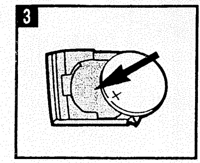
Temperature ranges:

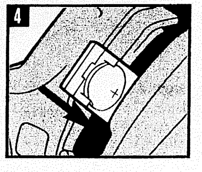
The recharging time is based on room temperature of 20°C.
The lower the temperature, the longer the recharging time.

For charging: 10°C to 35°C (50°F to 95°F)
For operating: 0°C to 40°C (32°F to 104°F)
For storing: –10°C to 30°C (14°F to 86°F)

PREPARATIONS (Cont'd)







CLOCK (LITHIUM) BATTERY INSERTION

Necessary for clock and date/time setting and for title memory display.

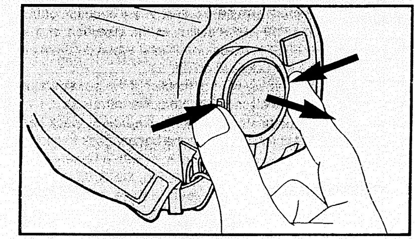
* Switch off the unit's power before inserting or removing the battery.

1 Open the cassette holder. ☞ P.16.
2 Pull out the battery holder.
3 Insert the lithium battery (Panasonic [Matsushita Electric] CR2025), with its plus (+) side up, into the battery holder.
4 Replace the battery holder until it clicks in place.

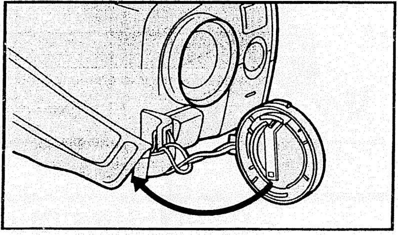
Warning on lithium battery

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of it in fire.

(See Warning on lithium battery, ☞ P.10)



To remove



During shooting

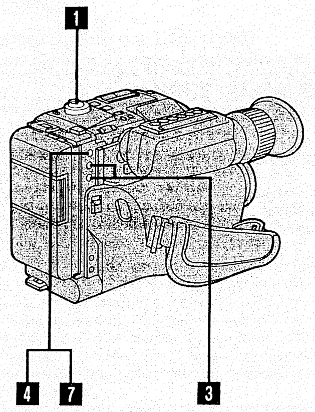
REMOVE THE LENS CAP

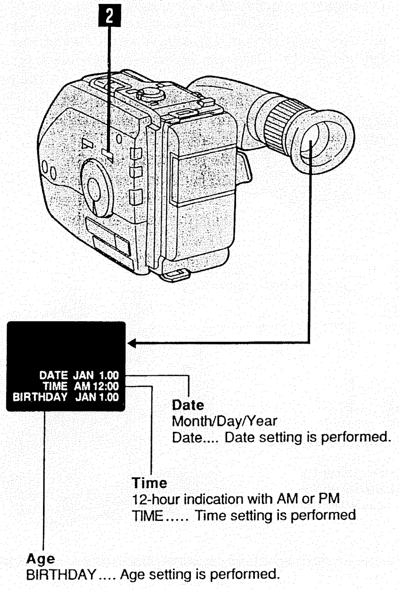
To remove the lens cap:

Press the tabs on either side of the lens cap and pull it out.

During shooting:

Attach the lens cap to the lens cap hook as illustrated to prevent the lens cap from swinging.





Date
Month/Day/Year
Date.... Date setting is performed.

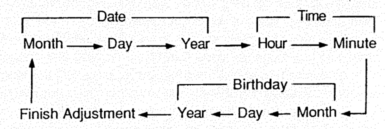
Time
12-hour indication with AM or PM
TIME..... Time setting is performed

Age
BIRTHDAY.... Age setting is performed.

SETTING DATE/TIME/BIRTHDAY

Before adjusting the date, time and birthday for the first time or after replacing the battery.

1 Set the power switch to "RELEASE".
2 Press DISPLAY. — The month blinks.
3 Press DATE/TIME ADJ. SET (+/–) to choose the correct month.
4 Press DATE/TIME ADJ. SELECT to select the next item to change, with the item selected changing in the sequence below:



5 Procedures in steps 3 and 4 allow you to set Date and Time.
After the Time has been set, proceed to the Birthday setting.

Setting the "Birthday"

The VideoMovie is provided with a "Birthday" memory function so that once someone's date of birth is entered into memory, the unit can display and record his or her age, automatically calculated to the current dates of the scenes.

- Age-indication appears as follows:

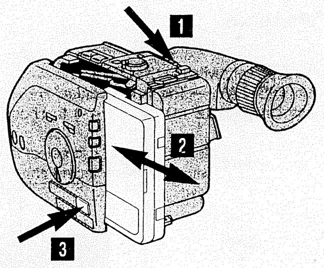
Under one-month-old	1D to 31D
Under one-year-old	1M to11M
Under 7-year-old	1Y0M to 6Y11M
7 and over 7-year-old	7 Y to 99Y

6 Make the settings for the items of BIRTHDAY as described in steps 3 and 4.
7 After all items have been set, press DATE/TIME ADJ. SELECT.
— Now that the setting is completed, blinking stops. The date will appear after the date, time and age have been displayed for about 3 seconds.

Notes:

- The clock begins timekeeping when the minute portion stops blinking and remains constantly lit. While the Date or Time are blinking, the clock does not keep time. Be sure to confirm the correct time when setting the Birthday.
- When re-adjusting the data, press DISPLAY to display each item and press DATE/TIME ADJ. SET and DATE/TIME ADJ. SELECT to correct them. After adjustment is completed, the date, time and age appear for about 3 seconds, then the display returns to the mode before correcting.

PREPARATIONS (Cont'd)



LOADING AND UNLOADING A CASSETTE

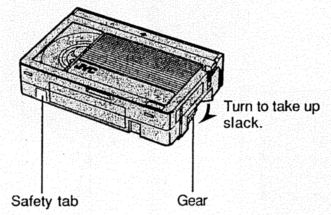
Loading

1 Slide EJECT.
— The cassette holder opens.
2 Insert the cassette with its label facing outward.
3 Press PUSH to close and lock the cassette holder.

Unloading

1 Slide EJECT.
— The cassette holder opens.
2 Remove the cassette.
3 Press PUSH to close and lock the cassette holder.

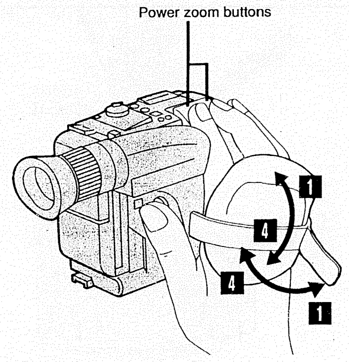
VIDEO CASSETTE



Storage of cassettes

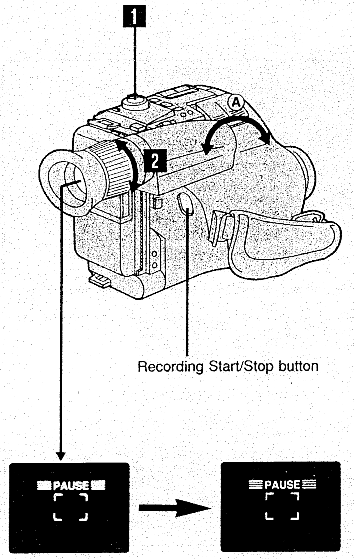
- Avoid exposing the cassettes to direct sunlight. Keep them away from heaters.
- Avoid storing the cassettes in humid or dusty places.
- Do not drop the cassettes. Do not expose them to violent vibrations or shocks.
- Do not expose the cassettes to strong magnetic fields (near a motor, transformer or magnet).
- Place the cassettes in cassette cases and position them vertically.

- This VideoMovie employs only the cassettes carrying the VHS-C mark.
- Recording onto prerecorded tapes automatically erases the previously recorded video and audio signals.
- An inverted cassette cannot be inserted.
- Do not load and unload the cassette repeatedly without allowing the tape to run at all. This will slacken the tape and thereby damage it.
Make certain before loading the cassette that the tape is not slack. If there is any slack, turn the gear on the cassette in the direction of the arrow to take up slack.
- The cassette is equipped with a safety tab to prevent accidental erasure. When the tab is removed, recording is impossible. If you wish to record on a cassette whose tab has been removed, use adhesive tape to reseal the slot.
- To avoid excessive exposure to dust and fingerprints, do not open the front tape cover.



ADJUSTING THE GRIP STRAP

1 Separate the Velcro strip to expand the loop.
2 Pass your right hand through the loop and grasp the grip.
3 Adjust the length of the strap so that your thumb and fingers can easily manipulate the Recording Start/Stop button and power zoom buttons.
4 Refasten the Velcro strip.



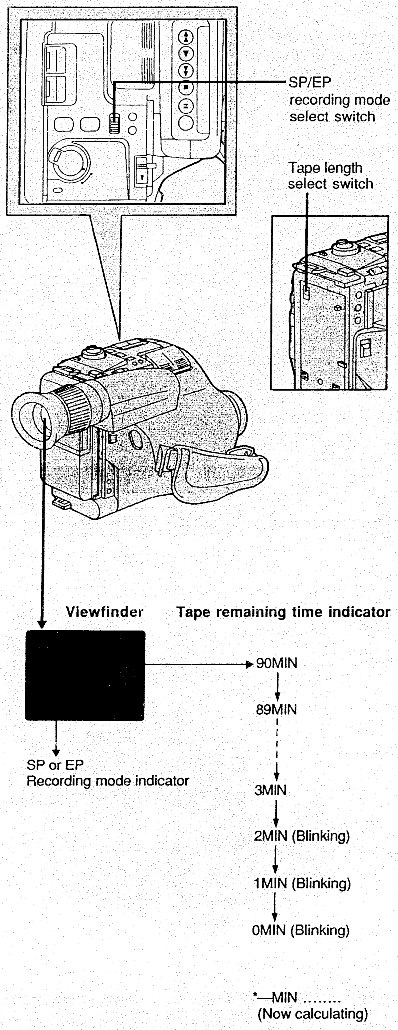
VIEWFINDER ADJUSTMENT

- **Positioning**
The viewfinder can be positioned for best viewability (Ⓐ).
- **Diopter adjustment**
The viewfinder lens can be adjusted to suit the operator's eyesight.

1 Set the power switch to "CAMERA AUTO".
2 Turn the diopter adjustment control until the indications in the viewfinder are clearly focused.

- **Sports-finder adjustment**
Operators who wear glasses, or have cosmetics on their faces can observe the viewfinder screen without making contact with the eyecup.
Turn the viewfinder adjustment ring completely to use the viewfinder as a sports-finder.

PREPARATIONS (Cont'd)


SP/EP recording mode select switch
Tape length select switch
Viewfinder
Tape remaining time indicator
90MIN
89MIN
3MIN
2MIN (Blinking)
1MIN (Blinking)
0MIN (Blinking)
SP or EP
Recording mode indicator
*—MIN ....
(Now calculating)

SET THE TAPE LENGTH

The tape remaining time is displayed in the viewfinder as shown. Before shooting, set the tape length select switch according to the tape being used.

- **TC-20:** When using a tape with 20-minute recording time or less.
- **TC-30:** When using a tape with recording time of more than 20 minutes (SP).

Notes:

- The indication will start blinking when the remaining tape time reaches 2 minutes.
- The indicated remaining time is approximate.
- The time required to calculate the remaining tape length and accuracy of the calculation may vary according to the type of tape used.
- "TAPE END" appears when the tape reaches its end. "TAPE END" also appears when a cassette is loaded whose tape is already at its end.

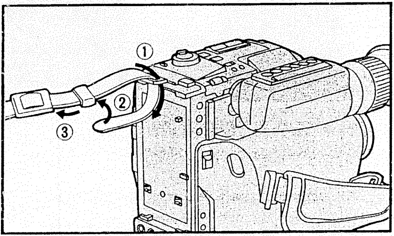
SELECT THE RECORDING MODE

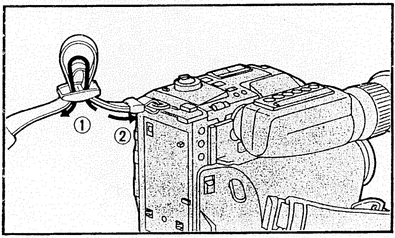
Set the recording mode select switch as required.

- **SP:** To maintain sound and picture quality. Better for dubbing later.
- **EP:** To record 3 times longer than when in the SP mode. For more economical use of tape.

Note:

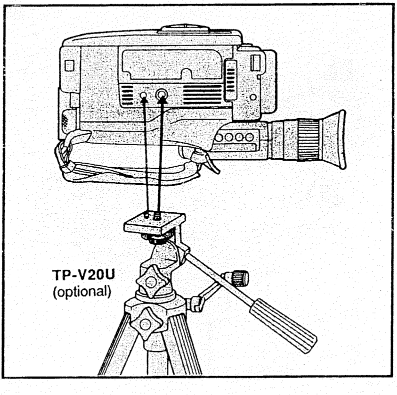
If the recording mode is switched during actual recording on the same tape, the playback picture will be blurred at the point of switching.





ATTACHING THE SHOULDER STRAP

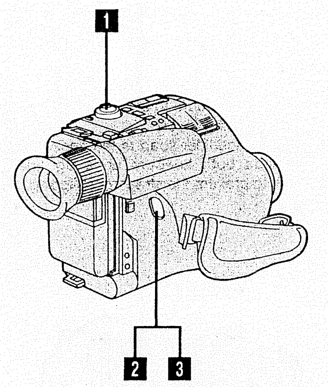
1. Loop the end of the strap over the top of the eyelet ①, then, folding it back, thread the end of the strap first through the keeper ②, then the buckle ③. Making sure that the strap is not twisted, repeat the above procedure to attach the other end of the strap to the other eyelet.
2. Adjust the shoulder strap to the desired length ①, then slide both keepers up snug against the eyelets to prevent the strap from slipping ②.

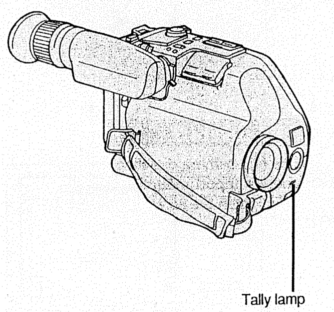

TP-V20U
(optional)

TRIPOD MOUNTING

Align the screw and camera direction stud of the tripod with the camera's tripod mounting socket and stud hole, and firmly tighten the screw.

RECORDING OPERATIONS



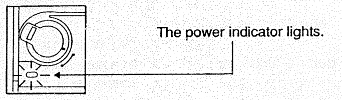


Preparations

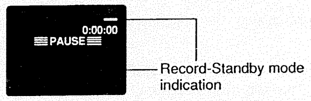
- Supply power.(☞ P.12.)
- Insert a video cassette correctly. (☞ P.16.)
- Adjust the grip strap. (☞ P.17.)
- Set SP/EP as required. (☞ P.18.)

1. To enter the Record-Standby mode

1 Set the power switch to "CAMERA AUTO".



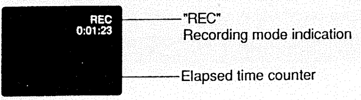
— The VideoMovie enters the Record-Standby mode. The aimed-at scene will appear on the viewfinder screen.



2. To shoot the scene

2 Press Recording Start/Stop button to start recording.

— The tally lamp lights while the recording is in progress.

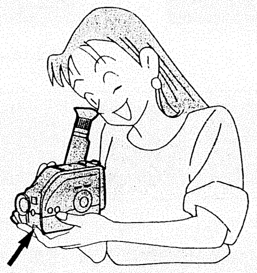


3 To stop recording temporarily, press the Recording Start/Stop button again.

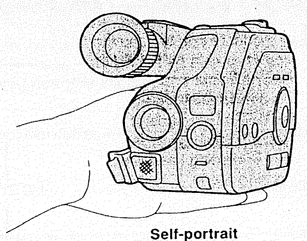
- To restart recording, press the Recording Start/Stop button.
- Repeating steps **2** and **3** produces assemble recordings.

Notes:

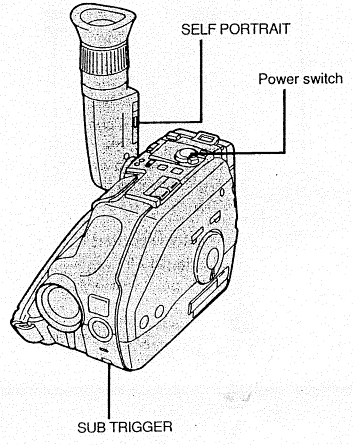
- For a longer pause, slide REC LOCK to turn off to save power.
- If the Record-Standby mode continues for longer than about 5 minutes, the unit switches itself off automatically. To restart recording, slide REC LOCK to turn power on and press the Recording Start/Stop button. This makes clean assembled recordings possible even after a long pause.
- When a tape reaches its end during recording, "TAPE END" indicator will appear in the viewfinder and the power itself off automatically if left for longer than 5 minutes.



Low-angle shots



Self-portrait



Second recording start/stop button (SUB TRIGGER) — for low-angle shots or Self-Portrait mode

When you shoot scenes from a low angle, use the second recording start/stop button for better viewability and securer positioning of the camera.

SELF PORTRAIT

In this mode, taking shots of yourself is possible while viewing your own image in the viewfinder.

1 Turn the viewfinder to face forward.

2 Set SELF PORTRAIT to ON.

3 Adjust the diopter adjustment control (☞ P.17).

- It is recommended to use SUB TRIGGER or the Remote Control Unit's START/STOP for starting/stopping the recording.

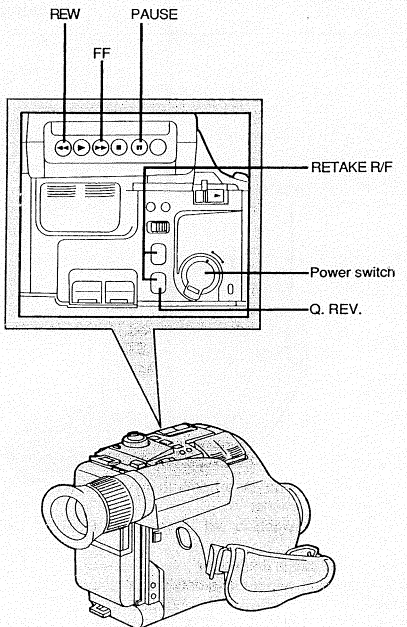
AUTO-REHEARSAL

Rehearsal mode is automatically engaged in the following situations:
The power switch is set to the "CAMERA AUTO" position and;

= no cassette is loaded, or

= a cassette without its safety tab is loaded.

- Rehearsal mode is not engaged when the power switch is set to the "PLAY" position.



QUICK REVIEW

If you want to review the end of the last recording for confirmation, use this function.

- Press Q. REVIEW from the Record-Standby mode.
  - — The tape will be rewound for about 2 seconds of program time and played back automatically for this section, after which it will pause in the Record-Standby mode for the next shot.

Note:

Distortion might occur when playback starts. This is normal.

RETAKE

While recording, you may decide to re-record certain segments. The Retake function is convenient for this.

1. Make sure the VideoMovie is in the Record-Standby mode. (If not, engage the mode.)
2. Set the power switch to "RELEASE".
3. Press RETAKE R or F to reach the point where you wish a new recording to start.
   - When RETAKE is released, the camera will enter the Record-Standby mode again.
4. Press the Recording Start/Stop button.
   — Recording starts.

Note:

Noise may appear during Retake. This is normal.

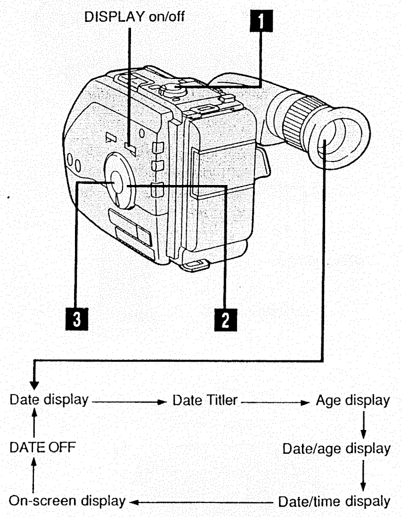
ASSEMBLE RECORDING TECHNIQUES

To replace the battery pack during recording:

1. If the low-battery warning (▭) blinks in the viewfinder while recording, stop recording and slide REC LOCK to turn power off.
2. Replace the battery pack with a charged one.
3. Slide REC LOCK to turn power on.
   — The unit will be in the Record-Standby mode.
4. Press the Recording Start/Stop button.
   — Recording starts.

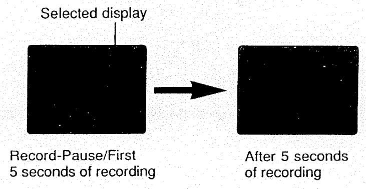
To record onto a partially recorded tape:

1. Set the power switch to "PLAY" and press PLAY to playback the tape to a point where you wish a new recording to start.
   - Use REW or FF for faster location.
2. Press PAUSE at the located point.
   — The unit will enter the Still mode.
3. Set the power switch to "CAMERA AUTO".
4. Press the Recording Start/Stop button.
   — Recording starts.



Date/Time/Age recording indications

Date display	Date titler	Age display
DEC 25. 92	DEC 25 1992	6Y11M
Date/Age display	**Date/Time display**	**Date off**
DEC 25.92 6Y11M	DEC 25. 92 PM 11:59	DATE OFF



Record-Pause/First 5 seconds of recording

After 5 seconds of recording

DATE/TIME/AGE RECORDING

The date/time/age can be displayed and recorded according to the selected mode.

Select the mode

1. Set the power switch to "RELEASE".
2. Set the rotary function selector to "MODE".
3. Press SELECT.
   — Cycles through the modes (as shown on the left).

- DATE TITLE is displayed in the center of the screen using characters that are four times larger than ordinary displays.
- DATE OFF disappears when;
  = setting the power switch to "LOCK".

Recording the display

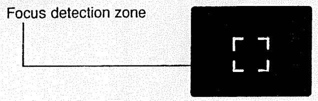
- When the power switch is set to "CAMERA AUTO LOCK" (= AUTO DISPLAY REC).
  The selected display mode will be automatically recorded for 5 seconds when;
  = being set for date/time/birthday, or
  = switching the displayed mode, or
  = changing the tape (= opening the cassette holder), or
  = after the date is changed.

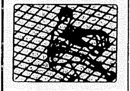
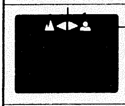
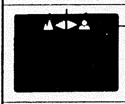
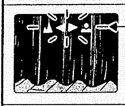
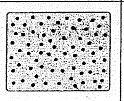
- When the power switch is set to "RELEASE", press DISPLAY on/off.
  - displayed..........it will be recorded.
  - not displayed.....no display is recorded.
- When "DATE OFF" is indicated, date/time/age cannot be recorded whether the power switch is set to "LOCK" or "RELEASE".

ON-SCREEN DISPLAY

The viewfinder indications can also be displayed on the screen of a monitor connected to the VideoMovie.

- Connect the VideoMovie to a video monitor, then select the On-Screen Display mode. The viewfinder indications appear on the monitor screen.
- The on-screen display is available in the Rehearsal or Record-Pause mode.



	Two subjects at different distances overlap in the same scene.
	Low illumination.
	The subject has no contrast (differences in brightness and darkness), such as a flat, one-color wall, or a clear, blue sky, for instance.
	Low-contrast warning A dark object is barely visible in the viewfinder
	Minute patterns or identical patterns that are regularly repeated.

FOCUSING

Auto-focus

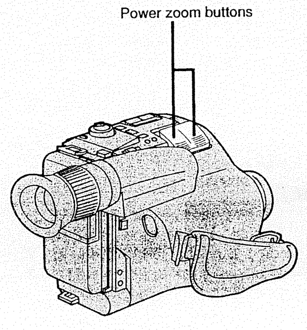
The rectangular focus area, shown by the indicators in the center of the viewfinder, detects focus.

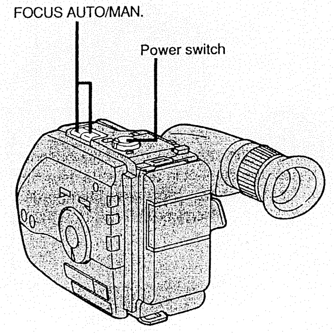
CAUTION

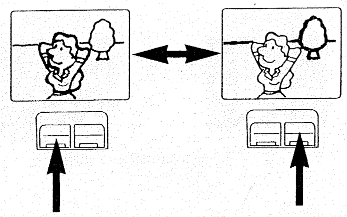
When not in use, do not leave the VideoMovie in the Auto Focus mode with power on; otherwise light entering the lens will operate the auto-focus mechanism, consuming power.

Notes:

- If the lens is smeared or is fogged up with condensation, accurate focusing is not possible. Keep them clean. If they become dirty, wipe with a piece of soft cloth. When condensation occurs, dry them by wiping with a soft cloth or wait for conditions in which they become dry.
- Correct focus may not be obtained in these situations on the left. In such cases manual focusing should be performed to obtain proper focus.







Manual focus

For manual focus operation:

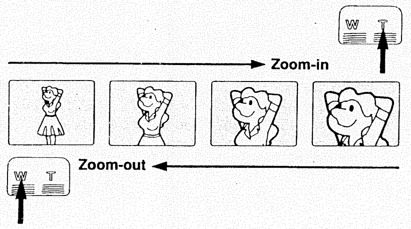
1. Set the power switch to "RELEASE".
2. Press FOCUS AUTO/MAN. to release the Auto Focus mode.
   — The Manual Focus indicators (⛰👤) appear and the focus detection zone disappears.
3. Zoom in on a subject by pressing "T".
4. Focus onto it by pressing either FOCUS button.
   - Press FAR.
     The ◄ indicator blinks. It will disappear when the button is released.
   - Press NEAR.
     The ► indicator blinks. It will disappear when the button is released.
   - When the focus level cannot be adjusted any farther or closer, the indicator (⛰) or the indicator (👤) will blink.
5. Determine the composition by pressing "W".

- **To release the Manual Focus mode** (to engage the Auto Focus mode)**:**
  Press FOCUS AUTO/MAN., or set the power switch to "LOCK".
  — Manual focus indicators (⛰👤) disappear and the focus detection zone appears.

Notes:

- When you use the Manual Focus mode, be sure to focus the lens in the maximum telephoto position. If you focus in on a certain subject in the wide-angle position, sharply-focused images cannot be obtained when zoomed up because the depth-of-field is reduced at longer focal lengths.
- When focusing manually, make neccessary viewfinder adjustments (☞ p. 17), then focus in.

ADVANCED VIDEOGRAPHY TECHNIQUES (Cont'd)



ZOOMING

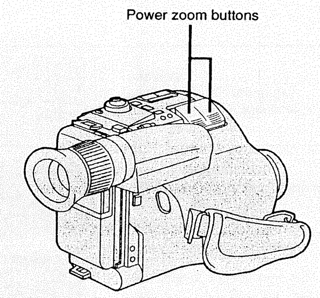
Pressing the power zoom buttons ("T" and "W") will vary the focal length of the lens.

Procedure

- Pressing T : Zoom in on the image (bring it nearer).
- Pressing W : Zoom out.

Notes:

- Focusing may become unstable during the zooming-in operation. In this case, first zoom in in the Recording Standby mode then, after using the manual focusing (☞ p. 25) to hold the focus fixed, zoom in or out in the Record mode.
- When shooting low-contrast subjects in the Zoom-in mode, the VideoMovie automatically zooms out with the low contrast indicator blinking and focus being performed.



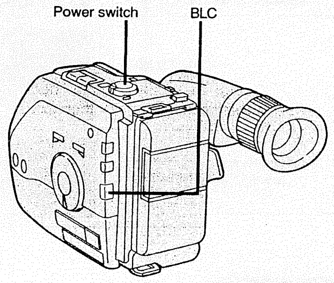
CLOSE-UP – Macro shot

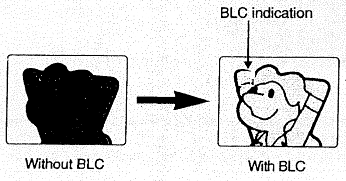
The VideoMovie's Full Range AF system can offer continuous shooting ability from close-up to infinity.

Procedure for Macro shooting

1. Press the "W" until the lens zooms out completely.
2. Position the subject in auto-focus detection zone.

- For best results, increase illumination when shooting in the Macro mode.

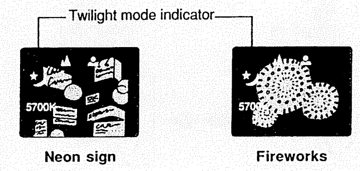


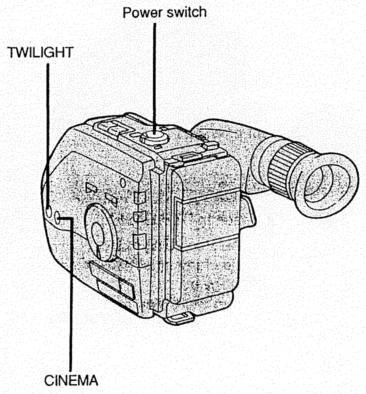


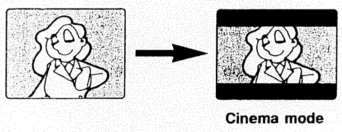
BACKLIGHT COMPENSATION

When excessive lighting is located in back of the subject, correct exposure may not be obtainable.
To compensate for this, use BLC.

1. Set the power switch to "RELEASE".
2. Press BLC.
   — The BLC indication appears on the viewfinder screen.
   - While it is being pressed, the iris is 1–2 f-stops wider than that adjusted automatically.
   - Releasing the button within 1.5 seconds locks the BLC condition.
     — To cancel, press it again, or set the power switch to "LOCK".







TWILIGHT MODE

To record scenes of low illumination with more natural-looking results, switch to the Twilight mode. This mode is effective when shooting scenes with fireworks, neon signs, and other distant views.

To engage the Twilight mode:

1. Set the power switch to "RELEASE".
2. Press TWILIGHT.
   — The Twilight mode indicator (★) appears in the viewfinder.
   — The white balance level switches to 5700K.
   — The Focus mode switches to manual, and is automatically set to infinity.
   — The shutter speed switches to the Auto mode.
   — The BLC (backlight compensation) switches off.

- The focal length can be adjusted with Manual Focusing (☞ P.25). The shutter speed can be adjusted with SHUTTER CONTROL (☞ P.29).
  Backlight compensation can be performed by pressing BLC. (☞ P.26).
  The white balance level can be adjusted (☞ P.51).
  However, once the unit is turned off, the manually adjusted focal length is canceled and automatically reset to infinity.
- If FOCUS is pressed, the unit enters the Auto Focus mode.

To release the Twilight mode:

Press TWILIGHT again, or set the power switch to "LOCK".
— The Twilight mode is released, and Focus, Shutter speed, white balance and BLC are switched to Auto.

CINEMA MODE

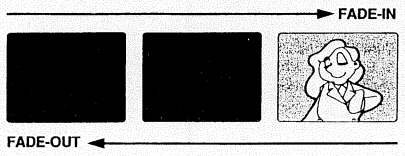
This VideoMovie incorporates a "Cinema" mode recording function which allows you to record black bars at the top and bottom of the screen to produce a cinema-like "wide-screen" effect.

1. Set the power switch to "RELEASE".
2. Press CINEMA.

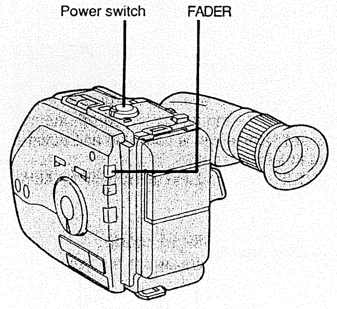
- To restore the normal screen, press CINEMA again, or set the power switch to "LOCK".

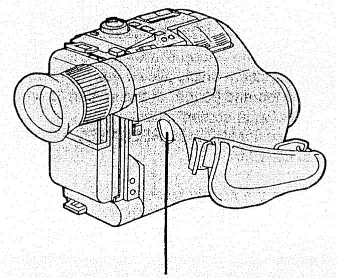
Note:

The Cinema mode can be engaged only in the Record-Pause, Record or Rehearsal mode.



Viewfinder





FADER

This VideoMovie incorporates a fader function which allows smooth video fade-in and fade-out to a black blank screen.

Fade-In

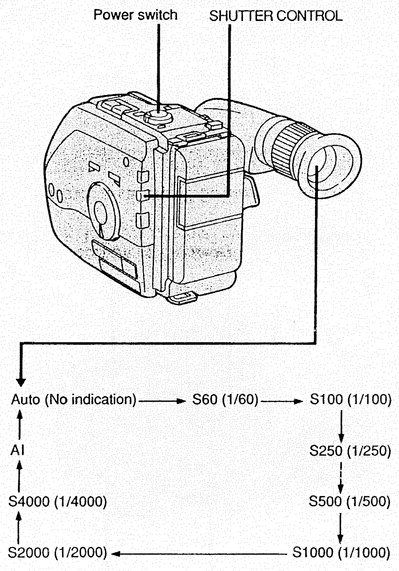
1. Set the power switch to "RELEASE".
2. Press FADER.
   — The VideoMovie enters into the Fade-Standby mode and "FADER" appears.
3. Press the Recording Start/Stop button.
   — The screen immediately becomes blank and recording begins. Fade-in starts at the moment the Recording Start/Stop button is released.
   - If the button is not released, the screen will remain blank and be recorded as long as the button is kept pressed.

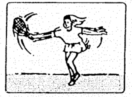
Fade-out

1. Set the power switch to "RELEASE".
2. Press FADER in the Recording mode.
   — The VideoMovie enters the Fade-Standby mode and "FADER" appears.
3. Press the Recording Start/Stop button.
   — The viewfinder indications start blinking. Fade-out starts and will be completed in a few seconds.
   - When completed, the VideoMovie enters the Record-Standby mode automatically. At this time, if the button is not released, the screen will remain blank and be recorded as long as the button is kept pressed.

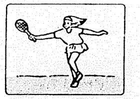
Note:

Viewfinder indication "FADER" is not recorded.





Auto mode



High-Speed Shutter mode

MULTIPLE-SPEED ELECTRONIC SHUTTER

The VideoMovie is equipped with a selectable high-speed shutter that allows better recording of quick movements for sharp, clear stills or slow-motion playback.
Select it when taping fast-action shots that you will want to play back later on a VCR equipped with the Still or Slow-motion mode.

1. Set the power switch to "RELEASE".
2. Press SHUTTER CONTROL to switch to the desired electronic shutter speed while recording or in any other mode.
   — Continues at the selected speed until switched to another speed.
3. Select the shutter speed by pressing SHUTTER CONTROL.
   — The shutter speed changes in the left order:

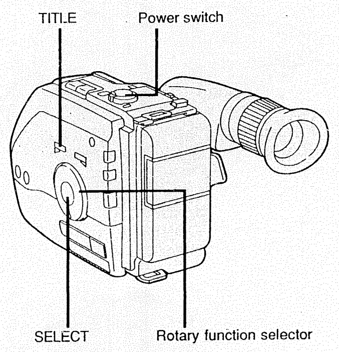
- When a high shutter speed is selected, it is indicated in the viewfinder screen.
- In the AI mode, illumination and shutter speed are automatically adjusted for clearer results when shooting quick-moving subjects. Effective for shooting athletic meets, tennis matches, etc.
  For a "portrait" effect (with the subject clearly focused and a blurred background), press the power zoom button "T" to zoom in, and select the AI mode.
- In the Auto mode, the shutter speed is automatically adjusted to reduce the flickering caused by light sources such as fluorescent lamps.

4. When finished recording the fast-action scene, switch back to the Auto mode by pressing SHUTTER CONTROL until the shutter mode indicator in the viewfinder disappears or set the power switch to "LOCK".

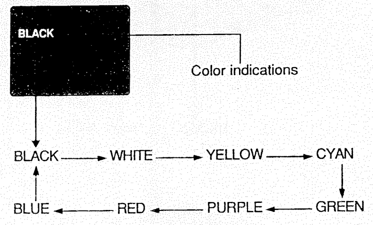
Notes:

- High-Speed Shutter modes require slightly more subject illumination than the Auto or S60 Shutter mode. It is recommended to use this mode in brightly lit settings, outdoor on a sunny day, for example.
- Picture color may be adversely affected in High-Speed Shutter modes when the subject is lit by alternating discharge-type light sources such as fluorescent or mercury-vapor lights.
- When playing back a section recorded in High-Speed Shutter mode, movement of subjects in the picture may not be smooth. This is not due to any defect of the unit.
- When in the Auto mode or AI mode, changing of the shutter speed may be noticeable. This is not due to any defect of the unit.

ADVANCED VIDEOGRAPHY TECHNIQUES (Cont'd)



Viewfinder Indications



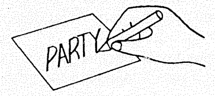
DIGITAL SUPERIMPOSE

The VideoMovie's Digital Superimpose function allows a title to be superimposed on a recording either positive or negative (reversed) style for more creative video opportunity.

Creating titles

Make note of the following guidelines to assure best results.

1. Create titles using dark colors on light backgrounds — black writing on white paper, for example.
2. Letters should be drawn with broad strokes.



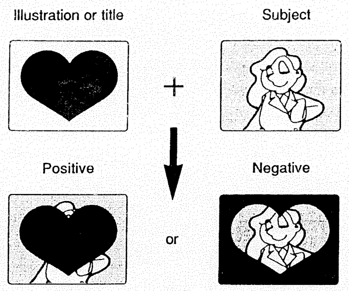
Storing a title

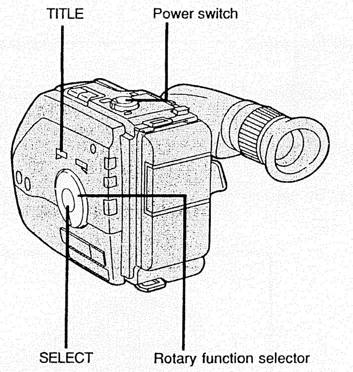
1. Set the power switch to "RELEASE".
2. Set the rotaly function selector to "MEMORY".
3. Aim the lens at your title in as well-lit a location as possible. Then, press SELECT for about 1 second to store the title.
4. Set the rotary function selector to "COLOR". Then, press SELECT to select the color.
5. Set the rotary function selector to "REVERSE". Then, press SELECT to choose negative or positive style.

- If the storing title is completed, set the rotaly function selector to "LOCK".

Notes:

- When the " " indication (clock battery warning) appears in the viewfinder, titles cannot be stored. Insert the lithium battery, or replace the inserted one with a new one according to the instructions on page 10.
- When storing a title, the scene visible in the viewfinder may differ slightly from that which will be recorded on the tape.
- When a title is stored poorly, check to see that the lighting is adequate and that the title is drawn with bold strokes, then shoot the title again.
- Every time setting to MEMORY, the previously recorded title stored in that page of memory will be erased, and replaced with the new title.
- MEMORY works when the power switch is set to "RELEASE"; care should be exercised not to set to "MEMORY" accidently as this will erase stored titles.





Superimposing a title

Mixing a title at the beginning of a recording

1. Set the power switch to "RELEASE".
2. Press TITLE.
   — Displays your title on the viewfinder screen.
3. Set the rotary function selector to "COLOR" and press SELECT to select a different color. Color can be changed at this point.
4. Set the rotary function selector to "REVERSE" and press SELECT to choose positive/negative style. Positive/negative style can be changed at this point.
5. Press the Recording Start/Stop button.
   — Recording starts and the title will now be mixed with what you are recording.
6. Press TITLE when you wish to end the titled portion of your recording.

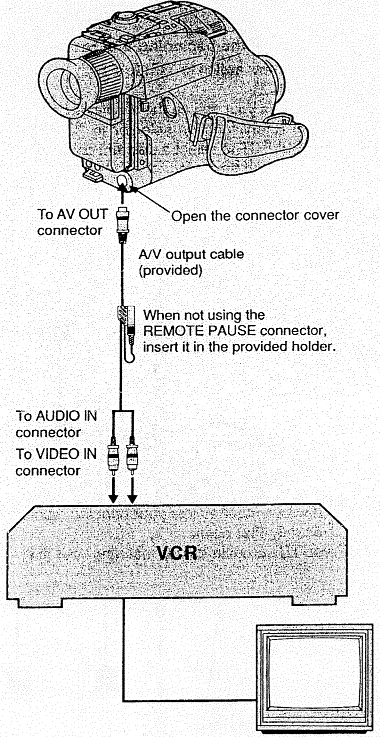
Inserting a title in the middle of a recording

1. Set the power switch to "RELEASE".
2. Confirm the color, and positive/negative style of your title. Then, press TITLE to turn it off.
3. Press the Recording Start/Stop button to start shooting.
4. Press TITLE when you wish to insert your title.
   — It will be inserted into your ongoing recording at exactly that point.
5. Press TITLE again to stop inserting your title.

Notes:

- With title off, set the rotary function selector to "COLOR" and press SELECT to check the color for 3 seconds. The color can be changed.
- The "Color" indication displayed in the viewfinder will not be recorded on the tape.
- When the lithium battery for the unit's clock is exhausted, the stored title will be lost.

CONNECTIONS FOR PLAYBACK

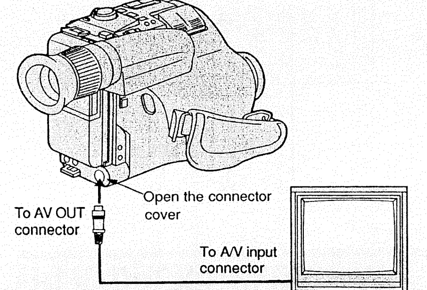

To AV OUT connector
Open the connector cover
A/V output cable (provided)
When not using the REMOTE PAUSE connector, insert it in the provided holder.
To AUDIO IN connector
To VIDEO IN connector
VCR

Please also refer to the instruction manual of the VCR or TV you are connecting the VideoMovie to.

Connection to a VCR

In this situation, use the A/V output cable.

1. Connect the VideoMovie and the VCR as in the diagram on the left.
2. Turn on the VideoMovie, the VCR and TV.
3. Correctly insert the appropriate cassettes into the VideoMovie.
4. Engage the connected VCR's AUX(iliary) mode, and TV's VIDEO mode.

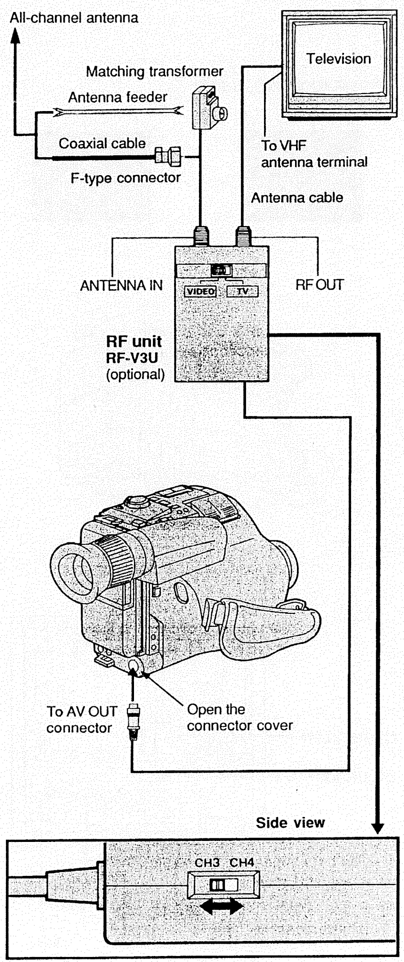

To AV OUT connector
Open the connector cover
To A/V input connector

A/V output cable (provided)

Connection to a television equipped with A/V input connector

In this situation, use the A/V output cable.

- Simply connect the AV OUT connector of the VideoMovie to the A/V input connector of the television.
- Use the Video (or AV) mode specified on the television, instead of tuning to channel 3 or 4.


All-channel antenna
Matching transformer
Antenna feeder
Coaxial cable
F-type connector
Television
To VHF antenna terminal
Antenna cable
ANTENNA IN
RF OUT
VIDEO
TV
RF unit
RF-V3U
(optional)
To AV OUT connector
Open the connector cover
Side view
CH3 CH4

Connection to a television not equipped with A/V input connector

In this situation, use the RF unit.

1. Set the output channel select switch of the RF unit to CH3 or CH4.
   - The RF unit permits playback of the video and audio recordings through a TV receiver. The signals from the RF unit are viewed through a vacant channel not used for broadcasting in your area.
   - The RF unit has been set to CH3 prior to shipment. Reset the channel to CH4 (using a screwdriver) in areas where channel 3 is employed for broadcasting.
   - This is your video channel. To view video cassettes, always set the TV channel selector to either channel 3 or 4.
2. Remove the antenna cable from the TV receiver.
3. Connect the antenna cable to the ANTENNA IN terminal of the RF unit.
4. Connect the RF OUT terminal of the RF unit to the 75-ohm coaxial antenna terminal of the television using the antenna cable.
5. Connect the VIDEO/AUDIO INPUT cable of the RF unit to the AV OUT connector of the VideoMovie.

OPERATION

Viewing video cassettes being played back with the VideoMovie

To view video cassettes or to monitor the recording, set the VIDEO/TV switch of the RF channel selector to the channel corresponding to the RF-output channel (3 or 4).

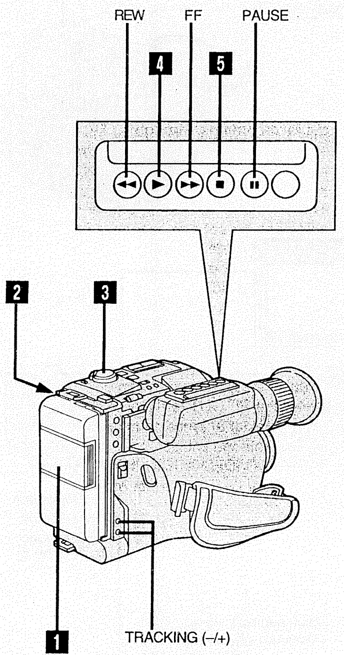
Viewing television programs

Set the VIDEO/TV switch to TV, and the TV receiver will function as usual.

Precautions for RF unit.

- For exclusive use with the VideoMovie.
- Do not disassemble or modify the RF unit.
- Do not expose it to strong shocks.
- Unplug the connected equipment during lightning storms. (Never touch the antenna cable.)

PLAYBACK OPERATIONS



The VideoMovie permits playback of recorded "VHS-C" video cassettes.
For connections refer to pages 32 and 33.

PLAYBACK OPERATION

1. Preparations

1. Supply power. (Battery or AC operation.)
2. Insert a pre-recorded VHS-C cassette.
   - Make sure tape is not slack inside the cassette.

2. To playback a cassette

3. Set the power switch to "PLAY".
   — The power indicator lights.
4. Press PLAY.
   — Playback starts and playback picture appears on the viewfinder screen and connected TV.

3. To stop playback

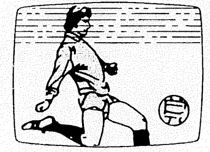
5. Press STOP.

- After about 5 minutes in Stop mode, the VideoMovie switches itself off automatically.

REWIND OR FAST-FORWARD THE TAPE

Rewind the tape:
Press REW less than about 2 seconds in the Stop mode.
Fast-forward the tape:
Press FF less than about 2 seconds in the Stop mode.
For high-speed REW or FF the tape:
Press REW or FF more than about 2 seconds and release it.
— The elapsed time counter changes to "-:--:--".
Note:
The elapsed time counter indication and counter memory function (☞P.35) do not function when using the high-speed REW or high-speed FF mode.

MANUAL TRACKING

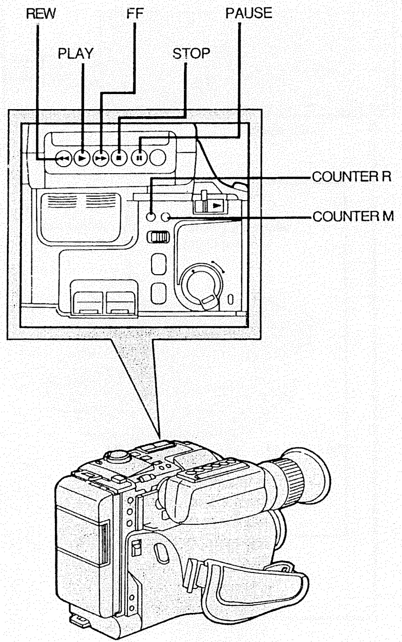


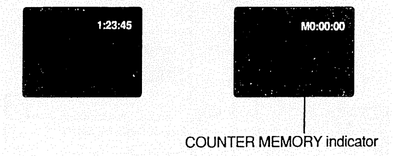
If noise bars appear on the screen, the tracking needs to be adjusted manually.

1. Press either TRACKING to adjust to the best picture possible.
   - To re-engage Auto Tracking, press both TRACKING (–/+) simultaneously.

Note:

- For tapes recorded on another videocamera or VCR, tracking adjustment may not be effective.





STILL PLAYBACK

Press PAUSE during playback.
— The picture stops on the screen.

- After about 5 minutes of still playback, the VideoMovie enters the Stop mode automatically for tape protection and switches itself off.

SHUTTLE SEARCH

Fast-speed forward playback:
Press FF in the Play mode.
— Playback will be speeded up to 3 times normal speed in the SP mode, 7 times in the EP mode.

Fast-speed reverse playback:
Press REW in the Play mode.
— The tape will be played back in the reverse direction at 3 times normal speed in the SP mode, 7 times in the EP mode.

Notes:

- For brief fast-speed searching, keep FF or REW pressed for more than 2 seconds; when you release the button, the Search mode will be cancelled.
- Noise bars will appear and pictures may become monochrome while in Still Playback or Shuttle Search. This is not due to any defect of the unit.

COUNTER MEMORY FUNCTION

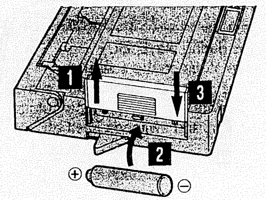
This VideoMovie incorporates a counter memory function which facilitates locating a specific tape segment.

1. Press COUNTER R.
   — Resets the counter to "0:00:00".
2. Press COUNTER M. — "M" appears.
3. After recording or playback, press STOP, then REW.
   — The tape will automatically stop at the counter reading of around "0:00:00".
4. Press PLAY. — Playback starts.

Notes:

- The counter memory function is effective in the Fast Forward mode as well.
- To cancel the memory function, press COUNTER M so that "M" disappears.
- When the power supply unit is disconnected, the counter memory function is instantly cancelled.
- The counter memory function is not effective when using the high-speed FF or high-speed REW (☞ p.34).

USING THE CASSETTE ADAPTER



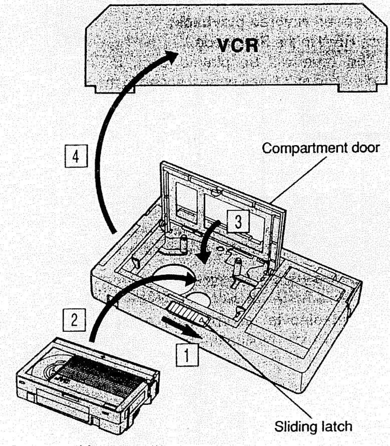
By using the provided cassette adapter, a VHS video cassette recorded with this VideoMovie can be played back with any deck-type VHS video recorder. Also, a VHS-C video cassette installed in the cassette adapter is fully compatible for both recording and playback on any deck-type VHS video recorder. Being battery-operated, the cassette adapter performs tape loading and unloading automatically.

Note:

Only compact video cassette tapes marked VHS-C can be used with the cassette adapter.

INSERTING THE BATTERY INTO THE CASSETTE ADAPTER

1. Remove the battery cover by sliding it up.
2. Install one "AA(R6)" size battery as shown.
3. Reattach the cover.



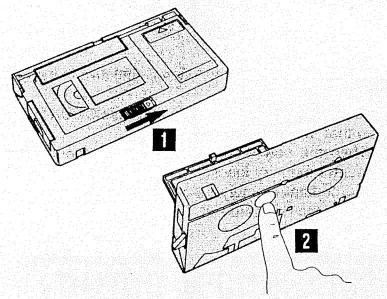
Compact video cassette

PLAYBACK ON THE VCR

1. Slide the sliding latch.
2. Insert the compact video cassette.
3. Close the compartment door.
4. Insert the cassette adapter into the VCR.
5. Playback the tape.

Note:

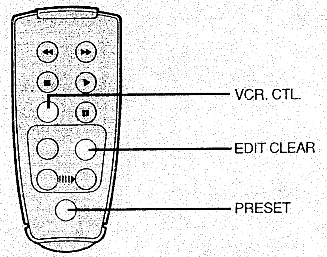
During special-effect playback (slow motion, still frame, etc.), the picture may vibrate or noise bars may appear on the screen.



REMOVING THE COMPACT VIDEO CASSETTE

1. Slide the sliding latch.
   — The tape will be unloaded and the compartment door will open.
2. Insert your finger into the hole on the underside of the adapter, push the cassette up from below and remove it.

EDITING TECHNIQUES



VCR BRAND NAME	BUTTONS	
	(A)	(B)
AKAI	STOP STOP	FF PLAY
GE	REW EDIT END EDIT END	REW FF EDIT CLEAR
HITACHI	STOP STOP	STOP VCR CTL.
JVC A	EDIT END	REW
JVC B	EDIT END	STOP
JVC C	EDIT END	VCR CTL.
MAGNAVOX	EDIT END REW REW	PAUSE EDIT END REW
MITSUBISHI	STOP STOP	EDIT STANDBY EDIT START
NEC	VCR CTL. VCR CTL.	EDIT STANDBY EDIT START
PANASONIC	REW REW REW STOP REW	VCR CTL. EDIT STANDBY REW PLAY EDIT START
RCA	EDIT END EDIT END STOP STOP EDIT END	FF PLAY STOP VCR CTL. EDIT CLEAR
SANYO	VCR CTL. VCR CTL.	STOP VCR CTL.
SHARP	REW REW	PAUSE EDIT CLEAR
SONY	STOP STOP VCR CTL. VCR CTL.	PAUSE EDIT CLEAR EDIT END REW
TOSHIBA	STOP STOP	EDIT END REW
ZENITH	REW	STOP

IMPORTANT:

- Although the provided remote control unit is compatible with JVC VCRs, as well as many VCR models manufactured by others, it is possible that the provided remote control will not work with your VCR.

The provided Multi-Brand Remote Control Unit can operate this VideoMovie from a distance as well as the basic operations (PLAY, STOP, PAUSE, FF, and REW) of your VCR. This remote control unit is useful when dubbing from the VideoMovie to your VCR.

- Install a battery before using the Remote Control Unit. ☞ P.10.

A. To operate the VideoMovie

1. Press EDIT CLEAR.
2. Turn the VideoMovie's power ON.
3. Press the button corresponding to the function you want to operate.

B. To operate your VCR

1 To set the Remote Control Unit to correspond to the brand of your VCR.

Turn the VCR's power off before starting.

1. Press EDIT CLEAR.
2. Refer to the diagram below, and while pressing PRESET, press button (A), then press button (B).
3. Release PRESET.

- The code is set and the VCR's power automatically comes on.
  (With some VCR brands, power won't come on automatically. In this case, turn the VCR power on manually and check to see if the remote control buttons work with the VCR.)

Note:

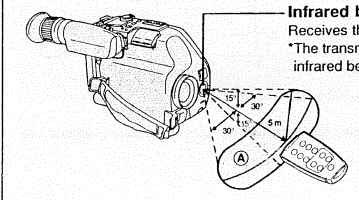
If your VCR has more than one code, choose the code with which you can turn the VCR's power on.

2 To operate the VCR:

1. Press EDIT CLEAR.
2. Turn the VCR's power ON.
3. Press the button on the Remote Control Unit corresponding to the function you want to operate while pressing VCR CTL.

- Since the Remote Control Unit has a number of operation codes, determine the appropriate code for operating your VCR by confirming correct VCR operations according to the steps above.

Remote control effective area



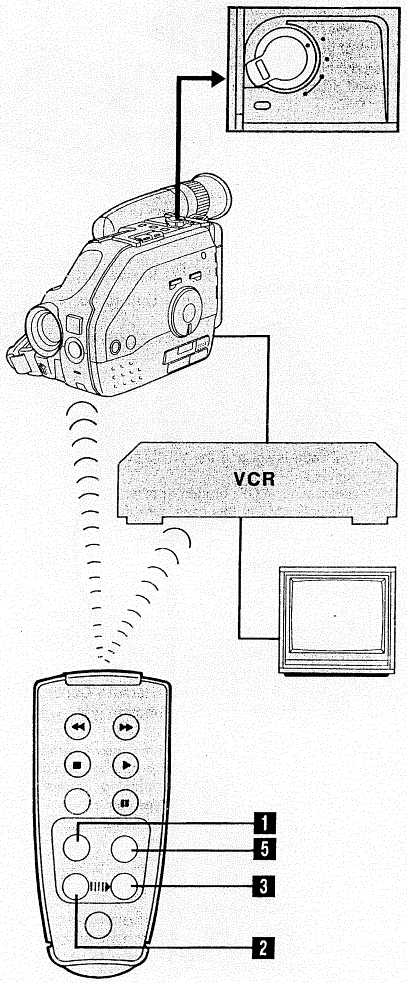
Infrared beam sensor window

Receives the transmitted beam signal.

*The transmitted beam may not be effective or may cause misoperations when the infrared beam sensor window is directly exposed to sunlight or powerful lighting.

Note:

When an accessory such as a conversion lens or filter is attached to the lens, the remote signal may not reach the VideoMovie's sensor from direction (Ⓐ).



DUBBING OPERATION

Using the Duet-MBR

With the provided Multi-Brand Remote Control Unit, it is possible to operate your VCR as well as the VideoMovie at the same time. It is useful when dubbing, editing a tape, etc.

Preparations

- Make connections. See page 39.
- VideoMovie: Correctly insert a recorded tape, then set the power switch to "PLAY".
- VCR: Turn power on. Insert a recordable tape, and set to the AUX(iliary) mode. Please refer to the VCR's instruction manual also.

Operation

1 Press EDIT STANDBY.
— VideoMovie: Enters the Play-pause mode.
— VCR: Enters the Recording-pause mode.

2 Press EDIT START.
— VideoMovie: Playback starts.
— VCR: Recording starts.
That is, dubbing begins.

3 Press EDIT END when the tape reaches a section you do not want to copy.
— VideoMovie: Remains in the Play mode.
— VCR: Re-enters the Recording-pause mode.

4 Repeat steps **2** and **3** to continue edit the material.

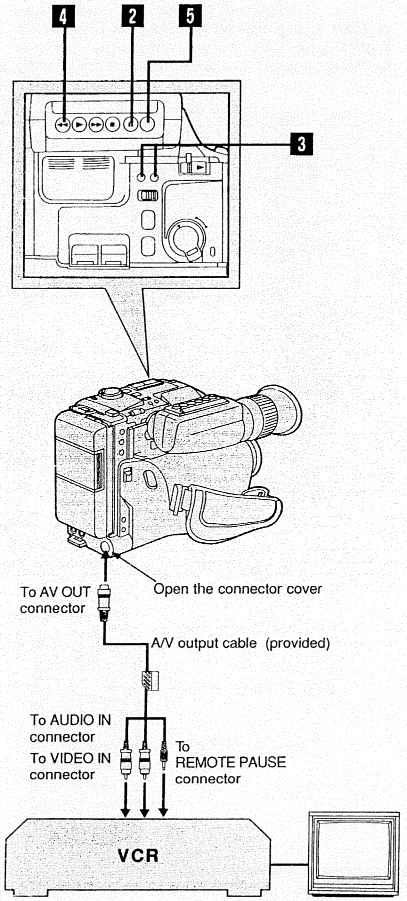
5 Press EDIT CLEAR.
— The VideoMovie and VCR enter the Stop mode, stopping the dubbing process.

Helpful Hints:

- The REW, FF, PLAY, PAUSE, and STOP buttons on the VideoMovie can be operated when the unit is in the **1** and **3** situation above. For fast searching to a recordable segment on the tape inserted into the VideoMovie, press REW or FF while playing back the tape. Press EDIT STANDBY when the segment is reached the VideoMovie enters the Play-pause mode.
- If you want only to dub a tape, leave out steps **3** and **4** above.

MASTER EDIT CONTROL SYSTEM (Assemble Editing) (When using a JVC VCR equipped with a Remote Pause terminal)

This feature functions only when using a designated JVC VCR equipped with a Remote Pause terminal. The Master Edit Control system enables control of the VCR via the VideoMovie's controls, for quality preroll editing without transition-point gaps and distortion. Please refer to the VCR's instruction manual also.



Preparation

- Connect the VideoMovie and the recording deck as in the diagram on the left.
- Turn on both the VideoMovie and the recording deck.
- Correctly insert the appropriate cassettes into the VideoMovie and the recording deck.
- Set the power switch to "PLAY".

1 Engage the recording deck's AUX(iliary) mode and Record-Pause mode.
— The tape in the deck winds backward for 1.3 seconds.

2 Engage the VideoMovie's Play mode to locate the edit-out point on the tape. When this point is reached, press PAUSE.

3 Press COUNTER R, then COUNTER M.
— "M 0:00:00" appears.

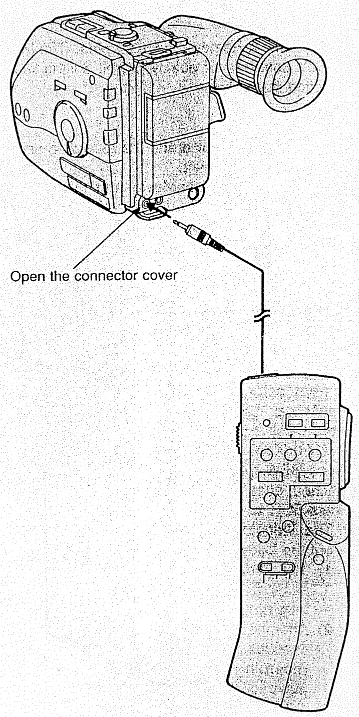
4 Press REW to locate the edit-in point. When it is reached, engage the Still mode.

5 Press EDIT to start editing.
- The VideoMovie and the recording deck carry out the following procedure automatically.
  1) The VideoMovie prerolls the tape for 5 seconds then starts playback to stabilize the tape run.
  2) After the VideoMovie has played back for 3.7 seconds, it sends a command signal to the recording deck. The deck then starts playback together with the VideoMovie for 1.3 seconds.
  3) When the VideoMovie's tape reaches the edit-in point, the deck starts recording in synchronization with it.

6 When the VideoMovie's tape reaches the edit-out point (counter reading of "0:00:00"), the VideoMovie enters the Still mode and the recording deck enters in the Record-Pause mode automatically.
- Repeat these steps as required.
- When the tape reaches the preset edit-out point during the dubbing operation, it may stop slightly before or after the designated point on the tape.

Note:
There are some VCRs which are not compatible with the Master Edit Control system.

USING THE OPTIONAL REMOTE CONTROL UNIT


Open the connector cover

RM-V20U
(optional)

The RM-V20U offers control of the VideoMovie's functions and makes additional editing functions such as Insert Editing and Audio Dubbing possible.
*Before use, refer to the instruction booklet.

Precautions

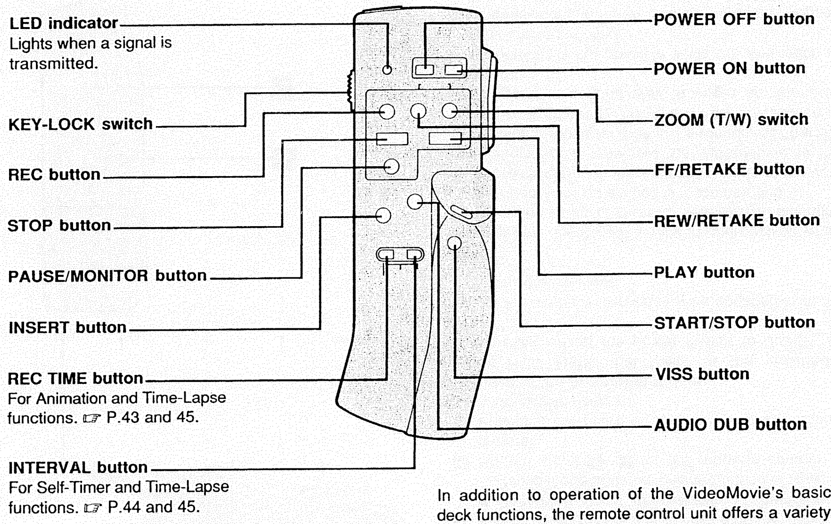
- Avoid violent shocks, especially take care not to drop the unit.
- Take care not to allow liquid to spill into the unit.
- Do not place heavy objects on the unit.
- Avoid leaving the unit in places subject to direct sunlight or extremely high temperatures.

Installing the batteries

1. Slide the battery compartment cover on the rear of the unit.
2. Insert 2 "AAA(R03)-size" batteries in the correct directions into the battery compartment.
3. Replace the cover.

Connect to the VideoMovie

- When you use the optional RM-V20U remote control unit, open the connector cover and connect to VideoMovie's REMOTE jack.


LED indicator
Lights when a signal is transmitted.
KEY-LOCK switch
REC button
STOP button
PAUSE/MONITOR button
INSERT button
REC TIME button
For Animation and Time-Lapse functions. ☞ P.43 and 45.
INTERVAL button
For Self-Timer and Time-Lapse functions. ☞ P.44 and 45.
POWER OFF button
POWER ON button
ZOOM (T/W) switch
FF/RETAKE button
REW/RETAKE button
PLAY button
START/STOP button
VISS button
AUDIO DUB button

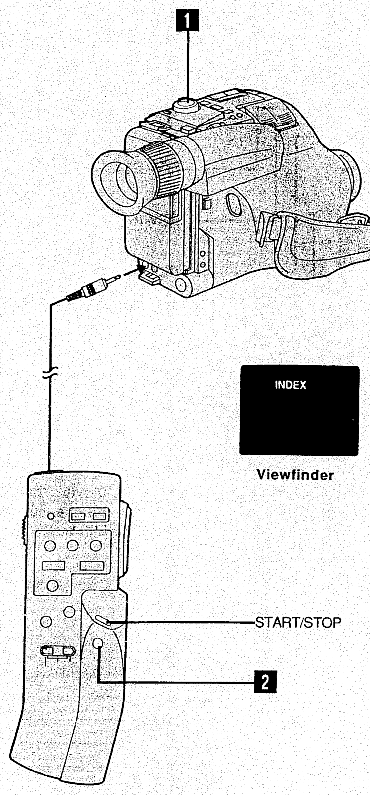
In addition to operation of the VideoMovie's basic deck functions, the remote control unit offers a variety of additional recording functions. ☞ P.42 through 47.

- Functions of the remote control unit's control buttons vary depending on the VideoMovie's power switch position.

Buttons	Functions	
	With the VideoMovie's power switch set to "CAMERA AUTO".	With the VideoMovie's power switch set to "PLAY".
POWER ON	Power on	
POWER OFF	Power off	
REC	—	—
START/STOP	Functions same as the Recording Start/Stop button of the VideoMovie.	
REW/RETAKE	Retake (Rewind)*/Quick Review	Rew/Rew Shuttle Search
FF/RETAKE	Retake (Forward)*	FF/FF Shuttle Search
REC TIME	Animation*/Time-Lapse*	—
INTERVAL	Self-Timer*/Time-Lapse*	—
VISS	Index Code Marking	—
PLAY	—	Playback/Start
PAUSE/MONITOR	—	Pause
STOP	—	Stop
INSERT	—	Insert Editing
AUDIO DUB	—	Audio Dubbing

*Functions only when set to "CAMERA AUTO RELEASE".

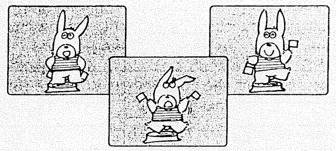
USING THE OPTIONAL REMOTE CONTROL UNIT (Cont'd)

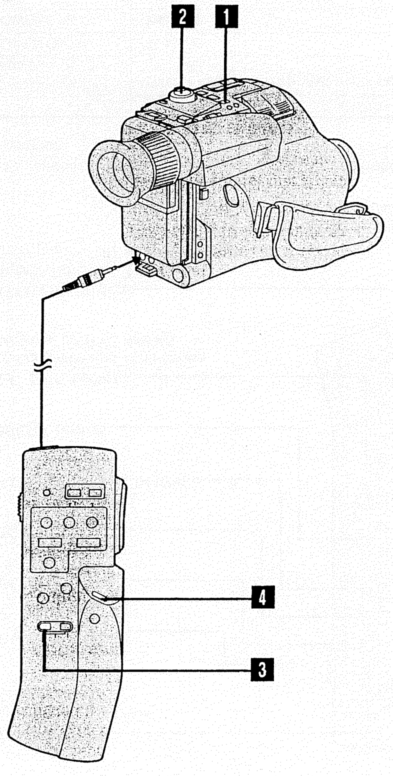


INDEX CODE MARKING

The VHS Index Search System (VISS) gives you automatic access to any point you select on a recording. Only the marking aspect of the Index Search System is included in this unit. It allows index codes to be placed on recorded tape for convenient dubbing or editing on VCRs with an Index Search function.

1. Set the power switch to "RELEASE".
2. Press VISS once to put an index code onto the tape.
   — The INDEX mode indication blinks during the marking process.
   - When the "INDEX" indication appears in the viewfinder, no VideoMovie functions can be executed.
   - If VISS has been pressed in the Record-Pause mode, an index code is put at the point where START/STOP is pressed.

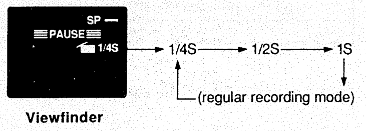




ANIMATION

The Animation function produces the illusion of movement in otherwise stationary scenes or objects. This technique is accomplished by shooting a series of slightly different pictures of the same scene or slightly different poses of the same object for a brief period of time.

1. Set SP/EP to "SP".
2. Set the power switch to "RELEASE".
3. Press REC TIME to select the recording time.
   — The following sequence of time settings is displayed with each press of REC TIME:



4. Press START/STOP after focusing on the subject.
   - Recording stops automatically in the Record-Pause mode after the selected period of time.
5. Repeat steps 3 – 4 for the required number of pictures.
6. Playback the recorded series to check if results were satisfactory.

To release the Animation mode:

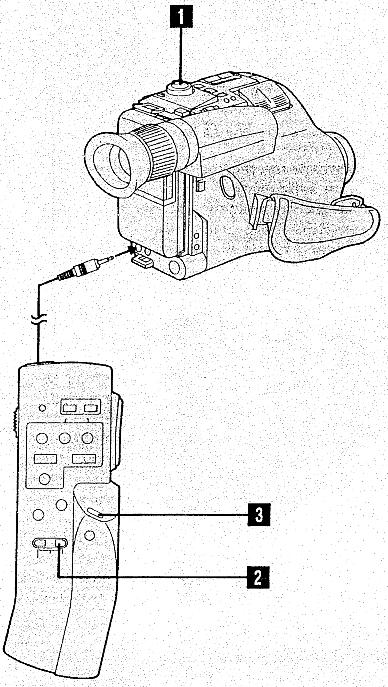
Press REC TIME until " " in the viewfinder disappears, or set the power switch to "LOCK" or "PLAY".

- The Animation mode can only be engaged from the Record-Pause mode.

Notes:

- Keep the VideoMovie steady in one position when filming the series of shots for best results. Mounting the VideoMovie on a tripod is recommended.
- Before recording in the Animation mode at the very beginning of a tape, set the VideoMovie to the Recording mode for about 5 seconds, so that the tape runs smoothly. Using the Fade-in function at this point is a good way to begin an animated program.
- Fade-in/out is not possible while the Animation or Time-Lapse shooting.
- When shooting in the Animation mode, the elapsed time counter reading may be incorrect. This is not due to any defect of the unit.

USING THE OPTIONAL REMOTE CONTROL UNIT (Cont'd)

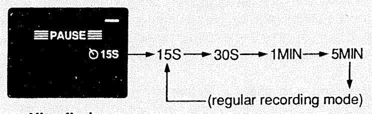


SELF-TIMER

The Self-Timer function allows you to set the amount of time delay before recording starts after START/STOP has been pressed. If the VideoMovie has been secured, the operator can enter the picture before actual recording begins.

1 Set the power switch to "RELEASE".

2 Press INTERVAL to select the interval time.
— The following sequence of time settings is displayed with each press of INTERVAL:



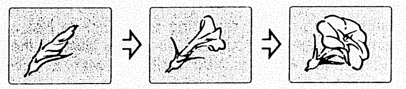
Viewfinder

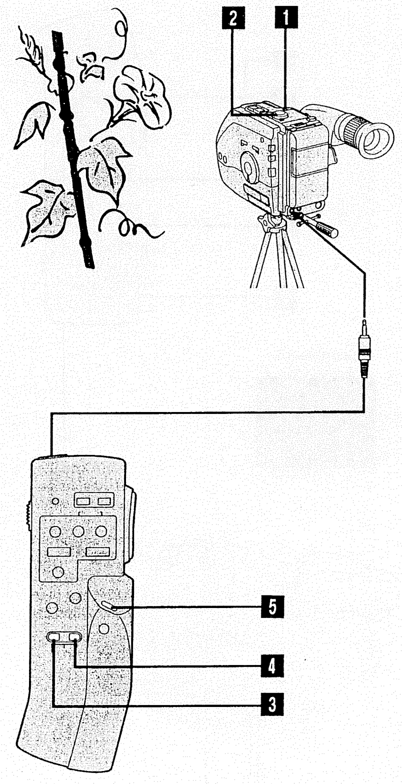
3 Press START/STOP.
- When the selected time has elapsed, recording begins automatically.
- When performing Self-Timer shooting, the tally lamp will start blinking approximately 10 seconds before the actual recording begins. Then when recording starts, the lamp lights normally to indicate recording is in progress.

To disengage the Self-Timer mode:

When "–" is not blinking:
Press INTERVAL continuously until " ⏲ " goes off.
When "–" is blinking:
Press START/STOP to stop the blinking, then press INTERVAL continuously until " ⏲ " goes off.

- The Self-Timer mode can also be disengaged by setting the power switch to "LOCK" or "PLAY".
- Turning the power off and on once engages the regular Record-Pause mode.





Note:
- When shooting in the Time Lapse mode, the elapsed time counter reading may be incorrect. This is not due to any defect of the unit.

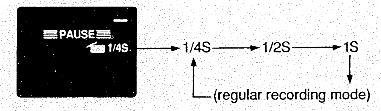
TIME-LAPSE

The Time-Lapse function allows automatic sequential on/off recording at preset time spans. With the VideoMovie continuously focused on a specific scene or object, the resulting recording will show subtle changes (such as shifts in cloud formations, plant growth etc.) over an extended period of time.

1 Set SP/EP to "SP".

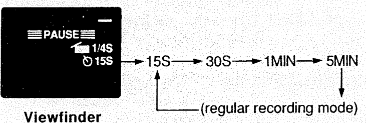
2 Set the power switch to "RELEASE".

3 Press REC TIME to select the recording time.
— The following sequence of time settings is displayed with each press of REC TIME:



Viewfinder

4 Press INTERVAL to select the interval time.
— The following sequence of time settings is displayed with each press of INTERVAL:



Viewfinder

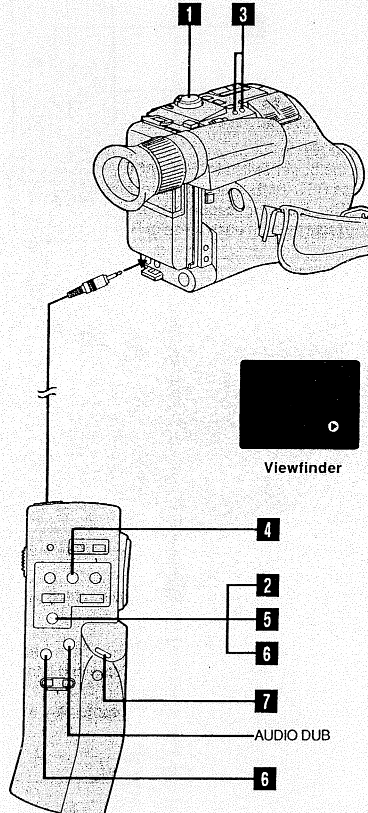
5 Press START/STOP to start the Time-Lapse recording. The selected recording time and interval will alternate automatically.
- The tally lamp functions in the same way as in Self-Timer shooting.

To disengage the Time-Lapse mode:

When "–" is not blinking:
Press INTERVAL and REC TIME continuously until " 🎥 " and " ⏲ " go off.
When "–" is blinking:
Press START/STOP to stop the blinking, then press the INTERVAL and REC TIME continuously until " 🎥 " and " ⏲ " go off.

- The time-lapse mode can also be disengaged by setting the power switch to "LOCK" or "PLAY".

USING THE OPTIONAL REMOTE CONTROL UNIT (Cont'd)



INSERT EDITING

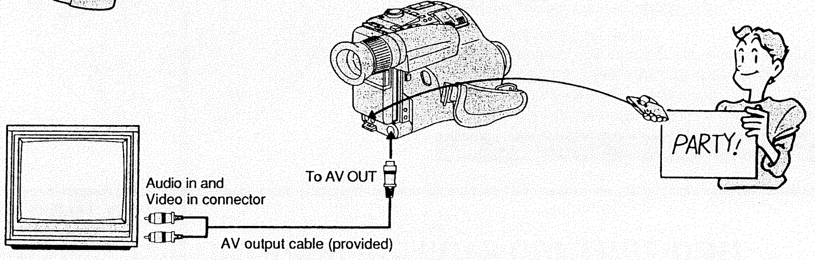
Insert editing means recording a new scene into a section of prerecorded tape so that a part of the original recording can be replaced with a new sequence without excessive picture distortion at the edit-in and edit-out points. In the Insert Editing mode, the original audio on the monaural audio track remains unchanged.

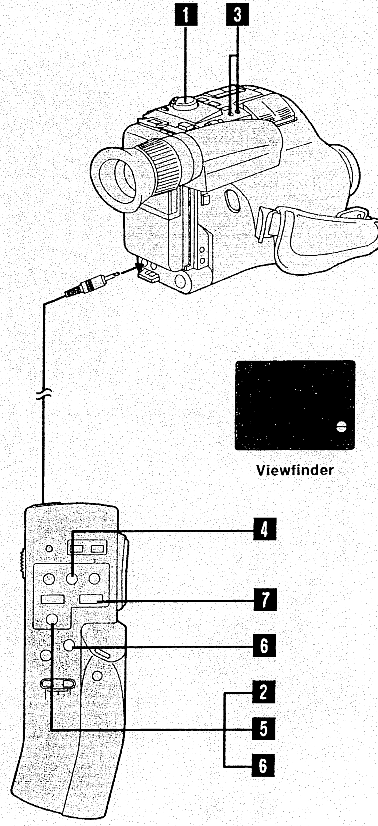
1. Set the power switch to "PLAY".
2. Locate the desired edit-out point on the tape and press PAUSE/MONITOR.
3. Press COUNTER R, then COUNTER M.
4. Press REW to rewind the tape a little beyond the beginning of the scene your wish to insert.
5. Press PAUSE/MONITOR exactly at the beginning of the scene to insert.
6. While keeping INSERT pressed, press PAUSE/MONITOR.
   — The VideoMovie enters the Insert Editing mode with the scene at which the VideoMovie is aimed appearing on the screen for monitoring.
7. Press START/STOP to insert the new sequence.

- When the counter reading of "0:00:00" is reached, insert editing stops automatically and the VideoMovie enters the Playback mode.

Notes:

- When in the Still mode, the counter indication may be blurred. This is normal.
- When the tape reaches the preset edit-out point during the editing operation, it may stop slightly before or after the designated point on the tape. Also, at that time, noise bars may appear momentarily. Neither of these is a defect of the unit.
- Only video signal is recorded in the Insert Editing mode. When the sound is to be recorded, press AUDIO DUB and PAUSE/MONITOR simultaneously in the Insert Pause mode. When INSERT and PAUSE/MONITOR are pressed simultaneously again, the unit re-enters the Video-signal-only Recording mode.





AUDIO DUBBING

Audio dubbing means recording a new soundtrack on a pre-recorded tape, i.e., replacing the original sound with new audio material.

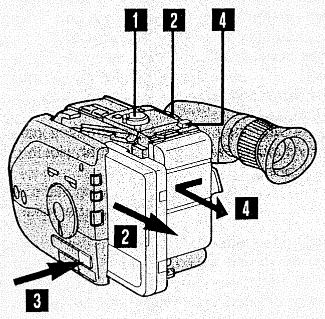
Precautions

- Tapes with their safety tabs removed cannot be audio dubbed. Reseal the safety tab slot to perform the dubbing.
- If whistling or howling is heard during audio dubbing, reduce the TV volume of move the mike farther away from the TV.

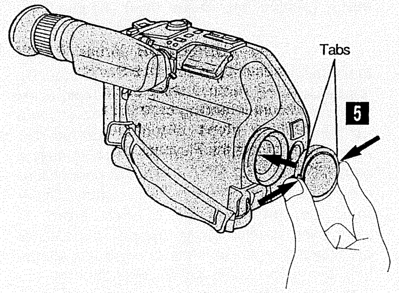
1. Set the power switch to "PLAY".
2. Locate the desired edit-out point on the tape and press PAUSE/MONITOR.
3. Press COUNTER R, then COUNTER M.
4. Press REW to locate more quickly the place on the tape you want to begin.
5. Press PAUSE/MONITOR at the exact beginning point.
6. While pressing AUDIO DUB, press PAUSE/MONITOR to enter the Audio Dub Standby mode.
7. Press PLAY. — Audio dubbing begins.

- When the counter reading of "0:00:00" is reached, audio dubbing stops automatically and the VideoMovie enters the Playback mode.

AFTER USE



1. Set the power switch to "OFF".
2. Slide EJECT to open the cassette holder, then remove the cassette.
3. Close and lock the cassette holder by pressing PUSH.
4. Press BATTERY RELEASE to remove the battery pack.
5. Attach the lens cap to the lens by pressing the tabs on either side of the lens cap.



HOW TO CLEAN THE VIDEOMOVIE

When the exterior is dusty, clean by gently wiping with a soft cloth.

CAUTION:
Avoid using strong cleaning agents such as benzine or alcohol as they may damage the exterior.

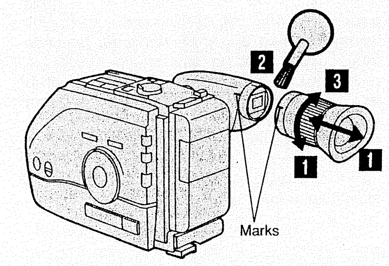
HOW TO CLEAN THE LENS

When the lens is dirty or dusty, blow it with a blower brush and then gently wipe with lens cleaning paper.

HOW TO CLEAN THE VIEWFINDER

The viewfinder eyepiece can be removed for cleaning.

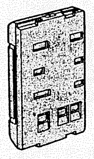
1. Turn the eyepiece counterclockwise and pull it out.
2. Remove dust with a blower brush.
3. Align the marks, reattach the eyepiece and turn it clockwise.



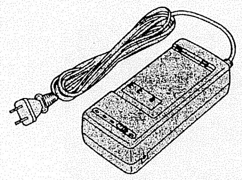
SYSTEMS FLEXIBILITY

For maximum enjoyment, make the most of the provided or optional accessories depending on the situation.

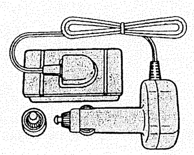
- **Battery pack**
  BN-V12U
  BN-V22U
  BN-V50U
  BN-V60U



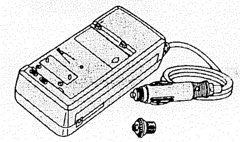
- **AC power adapter/battery charger AA-V10U**
  Charges battery pack or powers the VideoMovie via household AC current. (Can be used with 110 V to 240 V.)



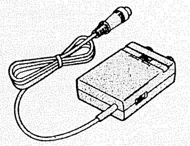
- **Car battery cord AP-V7U**
  Power the VideoMovie via a car battery. (Use with 12 V negative grounded cars only.)



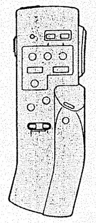
- **Car battery charger BH-V3U**
  Charges battery pack of powers the VideoMovie via a car battery. (Use with 12 V or 24 V nagative grounded cars only.)



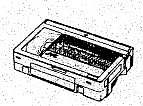
- **RF unit RF-V3U**
  Use to connect the VideoMovie to a regular television for playback.



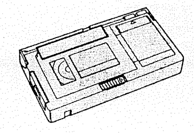
- **Wired remote control unit RM-V20U**
  Controls VideoMovie's VCR functions from a distance.



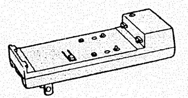
- **VHS-C cassettes TC-30/20**
  Allows 30/20 minutes of VHS recording and playback respectively.



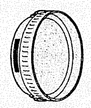
- **Cassette adapter C-P6U**
  Enables the VHS-C cassette to be used with regular VHS machines.



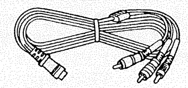
- **Battery charger BH-VC10U**
  Use to charge the battery pack.



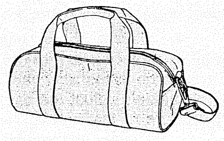
- **Conversion lens kit GL-V10U**
  Consists of telephoto (1.4x) and wide-angle (0.6x) conversion lenses.



- **A/V output cable VC-V826U**
  Use to connect VideoMovie to a television equipped with audio/video input connectors for playback, or to a VCR for dubbing or editing.



- **Active carrying bag CB-V7U**



Some accessories are not available in some areas.

SUPPLEMENTAL INFORMATION

What is "color temperature"?

Light is composed of various color components in different proportions. A relationship exists between the temperature of a light source and the color components of the emitted light; as the temperature rises, the color of the light varies from red, orange, yellow, white to blue in that order. "Color temperature" is a value that expresses differences in color among light sources, measured in Kelvin degrees. Bluish light has a higher color temperature than reddish light.

What is "white balance"?

Making the colors look natural on TV is what white balance is all about. Because a camera is not as adaptable as the human eye, if a light source is reddish, white subjects in that light are recorded as reddish. White balance adjustment is performed to compensate for color temperature variations of light so that whites are reproduced as white. Correct white balance makes all other colors correct. The VideoMovie can perform automatic white balance adjustment. However, if illumination is insufficient, white balance adjustment cannot be performed. To obtain correct colors, therefore, sufficient illumination is essential.

What is "illuminance"?

"Illuminance" (also called "luminance") is the intensity or brightness of light, expressed in lux. The VideoMovie is designed to provide best pictures under the conditions of a 700-lux (67 fc) illuminance, although shooting is possible all the way down to 2 lux (0.2 fc). To obtain good pictures in very bright light, the use of an ND (neutral density) filter is recommended. (See chart on the right.)

How to get good color pictures.

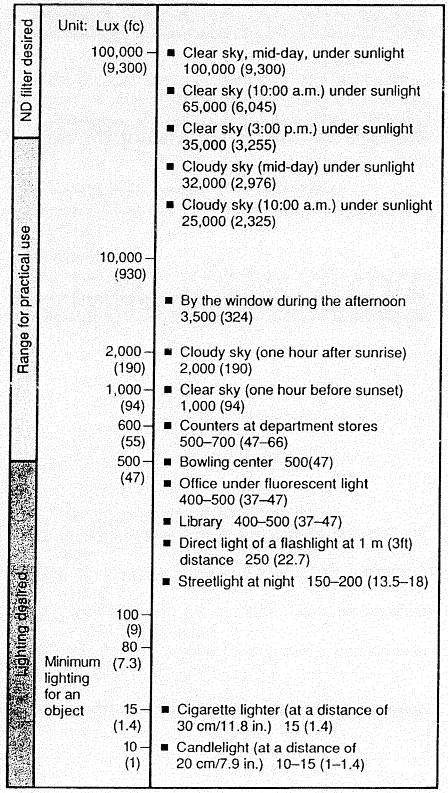
The simplest way is to provide sufficient lighting (close to the camera's reference illuminance) and accurately adjust the camera to the color temperature of that lighting. If light sources of different color temperatures are used together, accurate white balance adjustment is very difficult. For example, if natural light is mixed with artificial light, which is likely to occur next to windows, correct colors of the subject are difficult to obtain. It is recommended in such cases that curtains in the room be closed to shut out light from outside. Also, when artificial lighting devices are used, they should all have the same color temperature. For example, it is recommended that incandescent or halogen lamps not be used together with fluorescent lighting.

Color temperatures of various artificial lighting

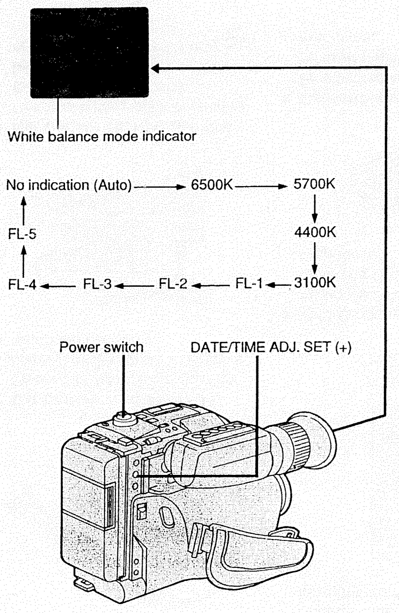
Type of illumination		Color temperature
Tungsten lamp for home use		2800 K
Tungsten lamp for photographic use		3200 K
Quartz-halogen lamp		
Blue lamp for photographic use		5000 K
Fluorescent lamp	Warm white	FL-1
	White	FL-3
	Daylight type	FL-4

Illuminance chart

- The values on this chart are approximated to give you a rough reference.



- Clear sky, mid-day, under sunlight 100,000 (9,300)
- Clear sky (10:00 a.m.) under sunlight 65,000 (6,045)
- Clear sky (3:00 p.m.) under sunlight 35,000 (3,255)
- Cloudy sky (mid-day) under sunlight 32,000 (2,976)
- Cloudy sky (10:00 a.m.) under sunlight 25,000 (2,325)
- By the window during the afternoon 3,500 (324)
- Cloudy sky (one hour after sunrise) 2,000 (190)
- Clear sky (one hour before sunset) 1,000 (94)
- Counters at department stores 500–700 (47–66)
- Bowling center 500(47)
- Office under fluorescent light 400–500 (37–47)
- Library 400–500 (37–47)
- Direct light of a flashlight at 1 m (3ft) distance 250 (22.7)
- Streetlight at night 150–200 (13.5–18)
- Cigarette lighter (at a distance of 30 cm/11.8 in.) 15 (1.4)
- Candlelight (at a distance of 20 cm/7.9 in.) 10–15 (1–1.4)



INDICATIONS	SITUATIONS
6500K	Cloudy day (To make the recorded pictures less bluish.)
5700K	Sunny day (To make the recorded pictures slightly less bluish.)
4400K	Evening glow (To make the recorded pictures less reddish.)
3100K	Halogen lamp (When using the video light.)
FL-1	Under warm white fluorescent lights (Regular-type lighting: on railway platforms, in Dept.stores, etc.)
FL-2	Under bulb-lamp-color fluorescent lights (High-grade-type lighting: In electric goods stores, etc.)
FL-3	Under cool white fluorescent lights (Regular-type lighting: In offices, etc.)
FL-4	Under high-grade fluorescent lights (High color temperature-type lighting: nearly day light)
FL-5	Under highest-grade fluorescent lights (Higher color temperature-type lighting: almost day light)

WHITE BALANCE ADJUSTMENT

This VideoMovie's Automatic Color Temperature system senses the color temperature of the ambient lighting for automatic white balance adjustment. However, precise color temperature adjustment is not possible under the following conditions:

- The light falling on the object being shot and the light around the VideoMovie are of different color temperatures.
- Either the object or the VideoMovie is in an area covered by a shadow.

In these cases, use the VideoMovie's built-in filters for white balance adjustment.

To adjust the white balance:

1. Set the power switch to "RELEASE".
2. Press DATE/TIME ADJ. SET (+) so that the required indication appears in the viewfinder.

- More creative pictures can be recorded if white balance adjustment is set to positions different from the one matching the actual situation.
  (For example: Recordings on a sunny day can be made that have a strong bluish tint if the white balance is set to 4400K, since this reduces the reddish colors.)

To switch the automatic adjustment:

Press DATE/TIME ADJ. SET (+) until the indication disappears, or set the power switch to "LOCK".

Useful tip:

It is helpful to connect your VideoMovie to a color monitor when adjusting the white balance.

CAUTIONS

For safety, strictly observe the following instructions.

- Do not open the VideoMovie's chassis.
- Prevent inflammables, water and metallic objects from entering the unit.
- Do not disassemble or modify the unit.
- Do not use the unit when there is lightning in the vicinity. Disconnect the power cable of connected equipment.

Avoid using the unit under the following conditions:

- Places subject to excessive humidity or dust.
- Near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).
- Places subject to soot or steam such as near a cooking stove.
- Places subject to excessive shock or vibration.
- Near a television set (rolling pictures or howling might result).
- Extremely hot places.

Do not expose the unit to high temperatures over 40°C (104°F) for long periods.

If the unit should be subjected to direct sunlight, or left in a closed car in summer, or placed near a heater, the CCD and the auto-focus sensor may deteriorate and the cabinet may become deformed. Furthermore, this also may cause the transistors and other electronic and mechanical parts to malfunction. Remember the following:

- Do not leave the unit in places of over 50°C (122°F).
- Do not use the unit in places of over 40°C (104°F).
- Do not use the unit in places of below 0°C (32°F).
- Protect the unit from excessively dry or humid conditions (below 35% or above 80% humidity).
- For long storage, select a place between –20°C (–4°F) and 30°C (86°F).

Take special care for protection of the unit.

- Do not allow the unit to become wet.
- Do not leave the unit in closed cars on hot summer days.
- Take special care not to drop the unit or strike it against hard objects. Protect from shocks during transportation.

Make it a rule to observe the following instructions.

- Do not remove the battery pack or disconnect other power supply units during recording or playback before setting the power switch to OFF. If not observed, this will cause tape damage and missoperation.
- When the unit is not in use, remove the battery pack.

Keep the lens and viewfinder eyepiece always clean.

- When the lens is dirty or dusty, blow it off first and then gently wipe with a soft brush or lens cleaning paper.
- Mold may form if the lens is left dirty.

Be careful not to damage the CCD.

- Do not keep the lens directed at extremely bright objects such as the sun or other light sources for long periods. Although the CCD is less susceptible to such burn than a tube would be, caution should be exercised when using this unit. Most importantly, the lens should be capped except while actually shooting.
- Do not direct the eyepiece of the viewfinder at the sun.

Handle the unit carefully.

- Protect the microphone from excessive shocks.
- Do not carry the unit by holding it only by the viewfinder.

Moisture condensation.

- You have observed that pouring a cold liquid into a glass will cause drops of water to form on the glass's outer surface. This same phenomenon occurs on the head drum of a VideoMovie when it is moved from a cool place to a warm place, after heating a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.
- Moisture on the head drum can cause severe damage to the video tape, and can lead to internal damage to the VideoMovie itself.
- If moisture condensation occurs on the head drum, a condensation warning appears in the viewfinder and the unit enters the Stop mode, unable to function. In such a case, wait for a few hours until the indicator disappears.

Maintenance

- When the cabinet is dusty, clean by gently wiping with a soft cloth.
- Avoid the use of strong cleaning agents such as benzine or alcohol as they may damage the cabinet.
- Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

General Battery Precautions

- When the RM-V20U/C-P6U is not functioning even when correctly operated, the batteries are exhausted. Replace them with fresh batteries.
- Use only following batteries in the unit.
  RM-V20U .... AAA (R03) size
  C-P6U .... AA (R6) size

Please make note of the following rules for battery use. When misused, batteries can leak or explode.

1. Insert the batteries correctly according to the diagram inside the battery section.
2. Do not use old and new batteries together.
3. Do not use two different kinds of batteries. Although sizes may be the same, voltages may differ.
4. Do not expose batteries to excessive heat as they can leak, or explode. Do not dispose of batteries in a fire.
5. Remove batteries from the unit if it is to be stored for an extended period to avoid battery leakage which can cause malfunctions.

IN CASE OF DIFFICULTY

What may initially appear to be trouble is not always a real problem. Make sure first...

Symptoms	Check points
Power	
No power is supplied.	■ Is the battery pack correctly installed? ■ Is the battery pack charged? ■ Is the power supply unit correctly connected?
Recording	
Recording is not possible.	■ Check to see if the cassette safety tab is in place. ☞ P 16.
Recording does not start.	■ Have you set the power switch to "CAMERA AUTO" first?
Playback	
Tape is running, but no playback picture appears.	■ Is the VIDEO/TV switch of the RF unit set to VIDEO? ■ Is the TV receiver set to your video channel? ■ If A/V connection is used, is the TV's VIDEO/TV switch set to VIDEO?
Noise bars appear in the playback picture.	■ Try manual tracking control. ☞ P 34. (Normal temporarily after Shuttle Search or Pause.)
Playback picture is blurred or interrupted.	■ Video heads may be dirty or worn out. For head cleaning or replacement, consult the nearest JVC Service Dealer.
Tape transport	
Tape stops during fast forward or rewind.	■ Is "M" indication visible in the viewfinder? If so, press COUNTER M to cancel the memory function.
Rewinding or fast forwarding is impossible.	■ Check to see if the tape has already been fully wound on one reel or the other.
Other	
Vertical white lines appear when shooting a very bright object.	■ This may occur when the background contrasts very much with the object. This is normal.
Picture is blurred in the Quick Review or Retake mode.	■ Is SP/EP properly set?
Error number (E01, etc.) appears in the viewfinder.	■ Consult your nearest JVC Service dealer.

The VideoMovie is a microcomputer-controlled device. External noise and interference might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC power adapter, etc.) and clock battery; and then reconnect it and proceed as usual from the beginning.

Special note on head cleaning

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Although this VideoMovie is equipped with a built-in head cleaner which automatically cleans the heads, reducing the likelihood of dirty heads, if such troubles are encountered, please consult your nearest JVC dealer.

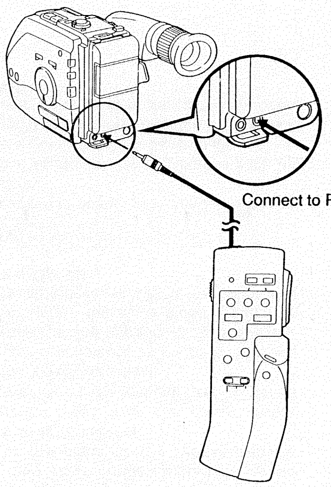
- A built-in head cleaner automatically cleans the video heads and head drum whenever a cassette is loaded and unloaded to reduce head clogging.

CORRECTIONS

❶ P. 37

Some codes that correspond to the VCR brands have been changed as per the diagram below.

VCR BRAND NAME	BUTTONS			
	INCORRECT		CORRECT	
	(A)	(B)	(A)	(B)
MAGNAVOX	EDIT END REW	PAUSE EDIT END	EDIT STANDBY EDIT STANDBY	REW STOP
PANASONIC	STOP	PLAY	EDIT END	PLAY
SANYO	VCR CTL.	VCR CTL.	VCR CTL.	PAUSE



❷ P. 40 to P. 47 — USING THE REMOTE CONTROL UNIT

When using the optional RM-V20U remote control unit, connect its cable to the VideoMovie's REMOTE jack as illustrated below.